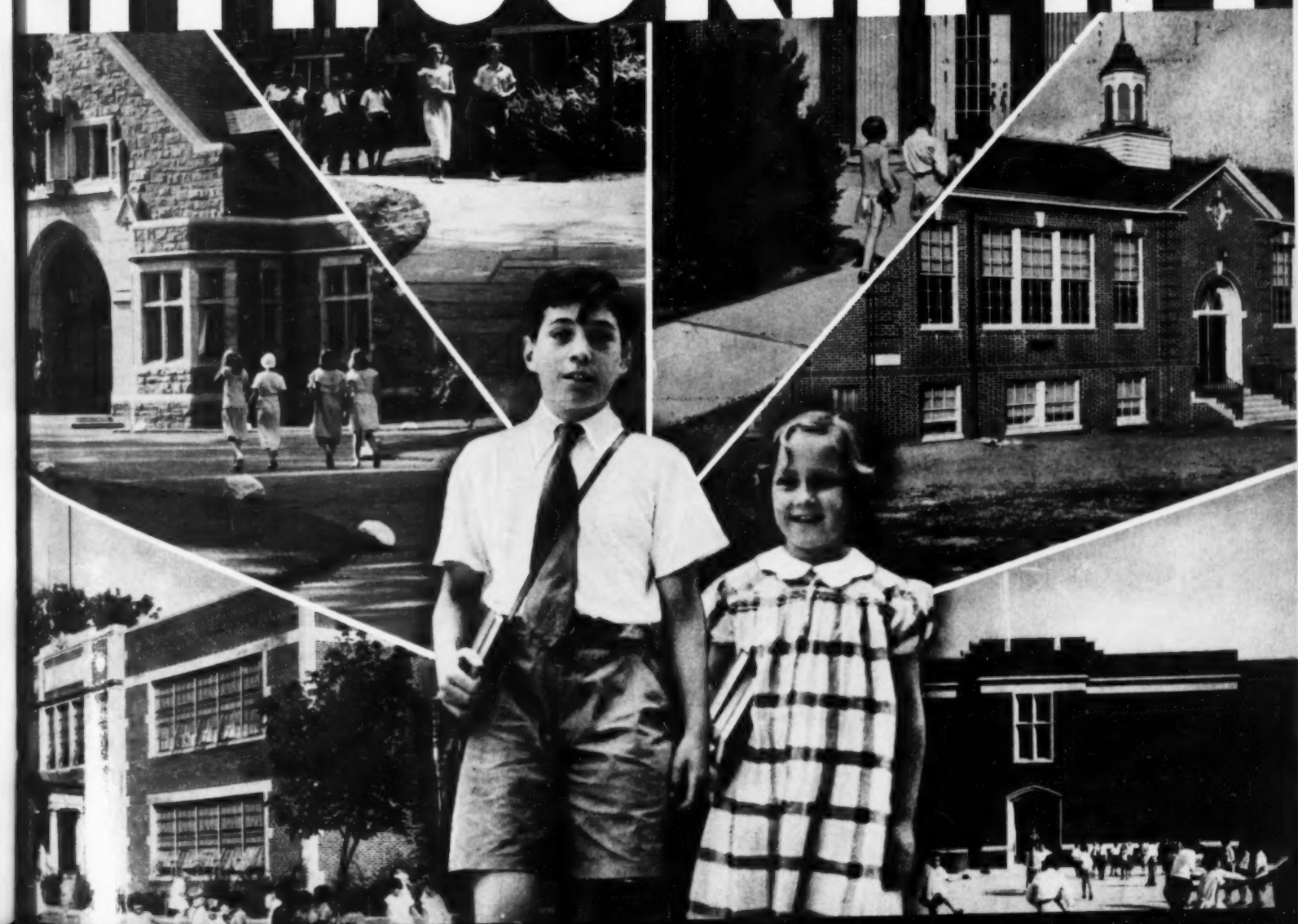


MODERN

m

LITHOGRAPHY



Permanent Royal Purple Lake 247P-2

Senelith Inks

were the first lithographic inks
made from dyestuffs
treated with sodium tungstate
for better sunfastness
and are still leading
with their outstanding resistance properties

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 Greene Street

New York, N. Y.

WANT SOME SELLING IDEAS?

Here's the sort of offset work customers are buying nowadays



PRINTING JOBS originate as ideas. When a customer knows what he wants, he's in the market. When you place an attractive printing job before him—and he likes it—he's a “hot” prospect.

Where can you get such ideas? Well, for instance, from the new packet of commercial jobs on Hammermill Offset.

Chances are you have already received a copy of this packet. If you haven't, there's a handy coupon below which will bring one to you

promptly. Get it and study its specimens. Here are samples of work other people are using today—ideas that may prove profitable to you.

And note that on Hammermill Offset, type is sharp and readable . . . halftones are rich and lifelike with unusual third-dimensional depth. Examine the colors . . . brilliant, sparkling, in perfect register. No trouble from printing show-through on two-sided jobs. Hammermill Offset's closely knit surface holds inks where they belong—on

their own side of the sheet.

Use this packet as an idea generator for your customers. Show them new ways to make their broadsides and catalogues click. For you, these specimens are visual proof that Hammermill Offset is a good press-room performer, proof that it's fast and trouble-free on the press . . . prints clean . . . holds accurate, fine-line register, winter or summer. It's a paper that pays you one profit in your shop and a second profit in customer satisfaction.

HAMMERMILL OFFSET

BY THE MAKERS OF HAMMERMILL BOND

Send for it!

Hammermill Paper Company, Eric, Pa.
Please send me, free, the Packet of
Commercial Reprints on Hammermill
Offset.

ML-AP

Name _____

Position _____

(Please attach to your business letterhead)

SENEFELDER

LITHOGRAPHIC SUPPLIES

Everything to make the job easier ~



Each month we will briefly describe an outstanding item in the Senefelder group of supplies for the lithographer.

SENELAC NEGATIVE VARNISH

Senelac Negative Varnish is a scientifically prepared fully transparent varnish for the protection of photographic plates and films. Used on wet and dry plates as well as on films; it forms a permanent protective coating against atmospheric changes and prevents scratching in storage or transit.

Senelac Negative Varnish dries in less than one minute; it makes a perfectly smooth transparent coating, altogether free from tack and which cannot gather any lint, dust, etc. Fully transparent; plates or films coated with it may be put through the camera without disturbing their coating; it will not water spot.

Senelac Negative Varnish may easily be washed off, if plate need be stripped or altered, with an application of benzol, and without disturbing the collodion. It forms a perfectly smooth transparent film, protecting plates and films from scratching, marring, or from gathering lint, dust, etc.

Senelac Negative Varnish is not affected by moisture; it permits cleaning with cold water and soap if need be . . . coatings are easily removed, without injury to work, by rubbing with a soft cloth saturated with benzol.

Write for leaflet No. 110 describing characteristics of Senelac Negative Varnish, directions for use and prices.

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 GREENE ST.

NEW YORK, N. Y.

Absorbent Cotton
Acids, Litho
Acid Brushes
Alum Powder
Aluminum Plates
Antifin Rubber
Preserver
Asphaltum Liquid
Asphaltum Powder
Berlin Paper
Bronze Powders
Bronzing Pads
Carborundum Powder
Caustic Soda
Cellulose Cleaning
Paper
Charcoal Sticks
Chemicals, Litho
China Marbles
Cold Top Enamel
Collodion Emulsion
Columbia Paper
Copierlack
Cornelin Solution
Correction Slips
Counter Etch
"Convenient"
Crayon Holders
Crayon Ink

Crayon Pencils
Crayon Transfer
Paper
Crayons, Litho
Deep Etch Supplies
Developing Ink
Double Etch Salt
Duralac Lacquer
Egg Albumen
Engrav. Needles
Engrav. Stones
Etches
Excelsior Paper
Felt Daubers
Film Filters
Flannel, Litho
Flint, Graining
Fly Card

Fountain Etch
French Chalk
Gamburger Slips
Gelatine Fails
Glass Marbles
Glycerine
Graining Marbles
Graining Quartz
Gum Arabic
Hand Rollers
Hydroquinone
Impression Rubber
Sheeting
India Paper
Ink Mullers
Ink Knives
Ink Slabs
Liquid Tusche

Litho Inks
Litho Stones
Lump Pumice
Magnesia Carb.
Maple Balls
Mica Powder
Moleskin
Malleton
Mutton Tallow
Negative Brushes
Negative Collodion
Negative Glass
Negative Varnish
Neg-O-Lac
Nitric Acid
Offset Blankets
Offset Inks
Offset Powder

Opaque
Palm Oil
Pens, Litho
pH Slide Comparators
Photographic Gelatine
Platinum Etch Salt
Plates, Lithographic
Press Boards
Printing Inks
Process Glue
Process Oil
Proofing Inks
Pumice Powder
Quartz, Graining
Rolling-up Ink
Rosin Powder
Rubber Snake Slips
Rubbing Stones

Schumacher Slips
Scotch Hone
Scotch Slips
Scotch Tape
Scraper Leather
Scraper Wood
Senebumen
Senelac Varnish
Sensitizers
Sharp Etch
Snake Slips
Soapstone
Sponges
Steel Balls
Steelclay Marbles
Stone Cement
Strecker Salt
Sulphur Flour
Tracing Blue
Tracing Paper
Transfer Ink
Transfer Papers
Transparency
Solution
Tusche
Varnishes
Wire Brushes
Zinc Plates
Etc., Etc.

MODERN LITHOGRAPHY

LITHOGRAPHED IN THE INTERESTS OF LITHOGRAPHERS EVERYWHERE



THE COVER

The 240,000 elementary schools of this country, providing for the educational needs of some 20,000,000 youngsters offer a rich market for the national advertiser, and, incidentally, for the lithographer. See page 20.

April, 1940

Volume 8 Number 4

We're pleased to present C. W. Latham to our readers this month (page 33) in the first of a series on offset press operation. Mr. Latham has just finished giving a course on Pressroom Problems at the Lithographic Technical Foundation, in New York, and will, over the next few weeks, present the same series to classes in New England and Philadelphia. The entire Philadelphia Litho Club has enrolled *en masse*, we understand. The addition of Mr. Latham as a regular contributor on offset press operation complements very nicely, we think, the monthly series on "Offset Paper at Work," by William Bond Wheelwright. Incidentally, Mr. Wheelwright's monthly stint has been omitted from the current issue, but will be resumed again in May. We felt that the article by Mr. Dunbar on page 27 would be enough for one month on paper. But don't forget to look for Mr. Wheelwright next month.

We've got some pretty appetizing editorial dishes brewing for next month, but the only one we're going to mention right now is "The Chemistry of Coating Solutions and Etches," by E. Bruyning. This is an advanced article on the subject, and, to be both slightly irreverent and non-technical about it, it's, as they say, a honey. Don't miss it.

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MODERN LITHOGRAPHY

Reg. U. S. Pat. Office

GRANT A. DORLAND, President; IRA P. MACNAIR, Vice-President; WAYNE E. DORLAND, Secretary-Treasurer; RICHARD ROLEY, Editor; SAMUEL D. WOLFF, Advertising Manager. Official Organ of the National Association of Photo-Lithographers. Published monthly on the 15th by The Photo-Lithographer, Inc., at 254 W. 31st St., New York, N. Y. ADVERTISING RATES: Advertising rates made known on application. Closing date for copy—20th of the month previous to date of issue. SUBSCRIPTION RATES: \$3.00 per year in the United States, \$4.00 per year in Canada. Single copies, 30 cents. Entered as second class matter, Dec. 29, 1939, at the Post Office at New York, N. Y., under the Act of March 3, 1879.

MARCH 1940

5

CONSTANT

Laboratory Control

**Safeguards the Quality of
Every Litholastic Roller**



It takes more than good materials alone . . . more than good workmanship alone . . . to turn out Vulcan Litholastic Rollers. It's a case of *knowing how*.

We know that every Litholastic Roller manufactured is destined for an important

VULCAN OFFSET BLANKETS

50% less swelling, by actual test, means better presswork, less trouble. Freedom from tackiness means cleaner, sharper printing, and closer register—because the sheet doesn't cling to the blanket.

job. Proved in the laboratory, Litholastic rollers must prove themselves in practical press operation too—and they *do* prove themselves. That's why, in all the years since Litholastic Rollers were first manufactured, *not one* has ever failed to give satisfaction . . . *not one* has ever been returned to us!

If you'd like a *better* roller—a roller that contains no rubber, and is unaffected by heat, cold, oils, driers, inks, or toners—write for complete information about LITHOLASTIC rollers. Please address Vulcan Proofing Company, First Avenue and 58th Street, Brooklyn, N. Y. Sales offices in principal cities.

VULCAN

Offset Blankets and Litholastic Rollers

Flash! Prices reduced! Write or wire us!

FORWARD STEPS

Six and a half years ago, when Lanston Monotype Machine Company began the manufacture of plate-making equipment for use in offset printing and color lithography, it was determined to make the best machines that sound technical counsel, engineering skill and precision methods of manufacture could produce.

With the advice of William C. Huebner (pioneer inventor and, without question, the foremost technical adviser in the lithographic industry) and under the supervision of Mauritz C. Indahl (with the Engineering Department at Monotype for more than forty years and for the past twenty-six years its Chief Engineer), to put this policy into effect Monotype has spent more than half a million dollars in engineering and development work alone.

We have felt there would be a market for equipment which contributed to facility of operation, economy of production and improvement in quality of offset printing and color lithography. Results furnish ample proof that new machines designed and built by well-known Monotype precision methods of manufacture are generally accepted by the trade as worthy contributions to the advancement of the art.

Type cast on Monotype machines for both text and hand composition is generally recognized to provide the best printing surface for making reproduction proofs and transparent proofs direct from type, and is so used by outstanding typographers, printers and lithographers. Its uniform height, clear and sharp printing surface, the ability to vary the space between letters, with all new type for each job, are important factors which virtually dictate its use in type work for lithography, offset and gravure. Some Monotype faces are especially designed for these uses.

In providing new and improved machines and devices, and in making available faces especially adapted for printing and advertising and for reproduction, Monotype has made substantial contributions to the upbuilding of the printing industry.

We believe Offset and Color Lithographers considering the installation of equipment for offset printing or color lithography will find it to their advantage to confer with us before purchasing. Machines and processes bearing the "Monotype" trade-mark are the best that competent engineers can design, skilled workmen can make AND MONEY CAN BUY. Send for our catalog of Monotype-Huebner Plate-Making Equipments.

LANSTON MONOTYPE MACHINE COMPANY

TWENTY-FOURTH AND LOCUST STREETS • PHILADELPHIA, PENNA.



does **YOUR LETTERHEAD** *express*
the CHARACTER of your business?

Here you see Raymond Loewy, the great industrial designer, at work designing his own 1940 letterhead. You'd expect the man who styled the new Studebaker car, the new Frigidaire, and the Pennsylvania streamlined locomotives to have a fine and distinctive letterhead that truly represents the character of his business. You'd expect him to choose the paper carefully for expressiveness and quality. He has. The paper...is Strathmore.

Paper is Part of the Picture of *you*, which your letterhead conveys.

When you write a letter on STRATHMORE BOND, or STRATHMORE WRITING, it costs less than 1% more than the same letter written on the cheapest paper you might buy. And on STRATHMORE PARCHMENT, or STRATHMORE SCRIPT, as fine papers as can be made, a letter costs only 2.9% more. Such plus value, for so little cost difference, is sound business economy.

* * *

THE STRATHMORE BUSINESS PERSONALITY CHECK LIST shows all the ways in which a business is seen and judged by its public, gives all the *appearance factors* important to your business. Write on your business letterhead for this check list. Dept. M.L.2, STRATHMORE PAPER COMPANY, WEST SPRINGFIELD, MASS.

**STANDARDIZE ON
STRATHMORE**

STRATHMORE LETTER-HEAD PAPERS for offset printing are easier to sell because of advertisements like this...advertisements that tell why a fine letterhead is true economy...feature leading business firms that use STRATHMORE LETTERHEAD PAPERS.

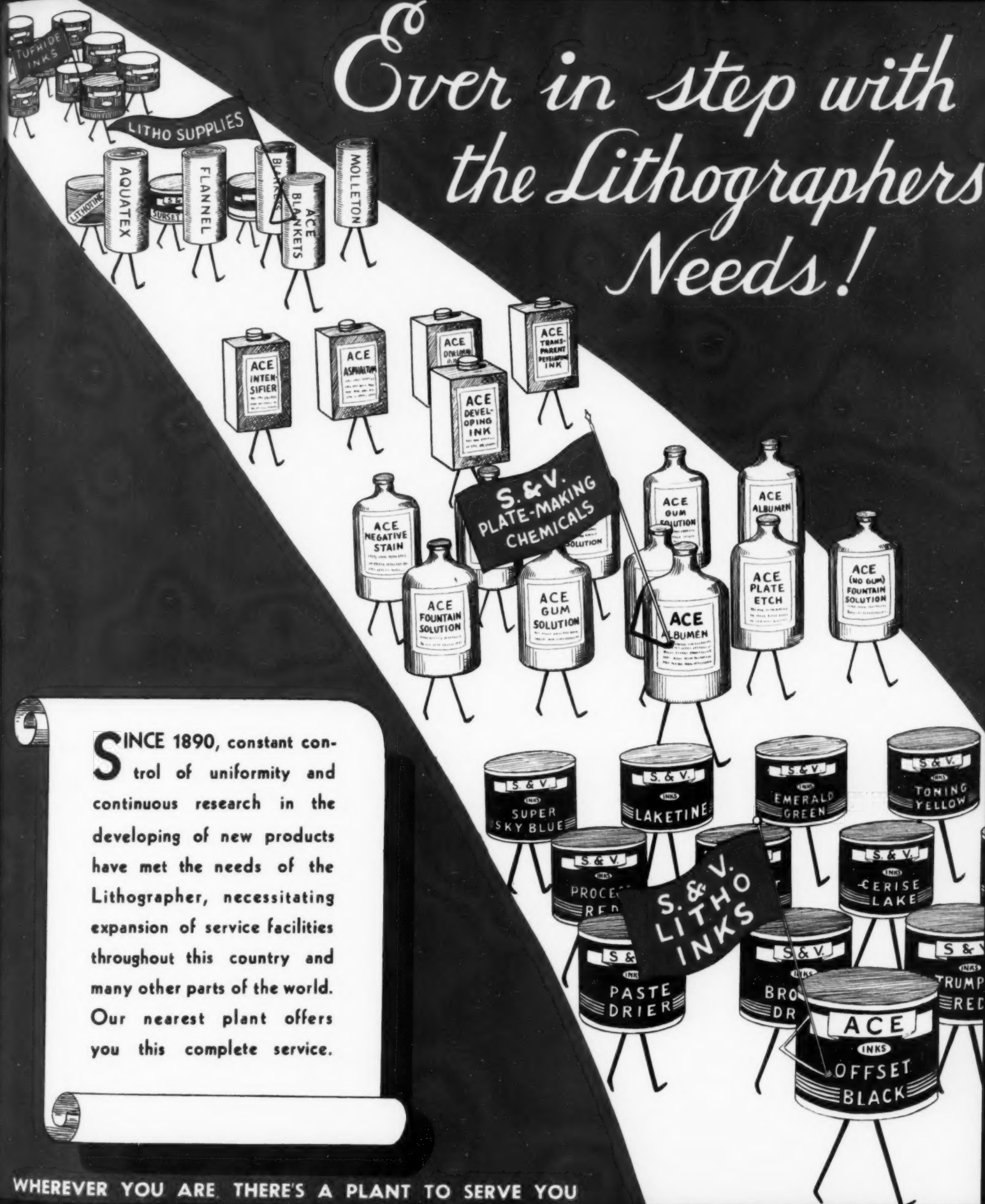
This series appears in:

**FORTUNE
TIME
BUSINESS WEEK
NEWSWEEK
ADVERTISING & SELLING
TIDE
FORBES
PRINTERS' INK MONTHLY
SALES MANAGEMENT**

STRATHMORE **MAKERS
OF FINE
PAPERS**

MODERN LITHOGRAPHY

*Ever in step with
the Lithographers
Needs!*



SINCE 1890, constant control of uniformity and continuous research in the developing of new products have met the needs of the Lithographer, necessitating expansion of service facilities throughout this country and many other parts of the world. Our nearest plant offers you this complete service.

WHEREVER YOU ARE, THERE'S A PLANT TO SERVE YOU

Sinclair and Valentine Co.

MAIN OFFICE AND FACTORY: 611 WEST 129th STREET, NEW YORK, N. Y.

Albany
Baltimore
Boston

Chicago
Dayton
Dallas

Cleveland
Jacksonville
Kansas City

Los Angeles
Miami
Nashville

Philadelphia
San Francisco
Seattle

New Orleans
New Haven
Birmingham

Havana
Manila
Mexico City

WHAT ARE THE ADVANTAGES OF JOINING THE NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS?

The surest way to weld into one strong industry, the many small, medium and large size lithographic plants in operation and those that will come into the industry, is to make available to these lithographic plant owners, information which will build solid, profitable units.

No industry can be strong, unless the units which make it up are healthy. Strength can come from avoiding mistakes which have been made by others who have gone before.

For seven years the National Association of Photo-Lithographers has studied costs, production standards, trade practices, stabilization, sales promotion and selling, for the purpose of serving the industry. As a result of this activity, many worthwhile benefits have been established all of which are available to any owner of lithographic equipment.

The program set up for the new year is the most ambitious ever set up. It includes:—

The designing and publishing in booklet form of a uniform cost system for the industry.

The revision, to bring up to date, and publication in booklet form of economic hourly costs and production standards for the equipment used in the industry.

The gathering, setting up and publishing in booklet form a sales training program for the industry.

It is virtually impossible to list all the benefits of membership. Scores of questions come to headquarters every month. Headquarters endeavors to give the lithographic members answers to such typical questions as:

1. What has been the members' experience with ——— Spraying Equipment?

(Experience of a number of lithographers secured for the questioner.)

2. What experience have members had with air conditioning equipment?

(Experience of a number of lithographers secured and letter regarding this sent entire membership.)

3. Can you get me a good estimator?

(Several estimators interviewed, a competent estimator sent to member.)

4. Will you try to get me a cameraman, a plate maker and a pressman?

(Application for employment received in headquarters from employees. Member secured desired help.)

5. What are the average selling prices on combination work in ——— (City)?

(Photostat of combination prices in ——— (City) sent member.)

6. Can you tell us whether typewritten material is permitted in publications entitled to second class entry?

(Information furnished member.)

7. What basis do photo-lithographers use in pricing half-tones?

(Information furnished member.)

8. What are the hourly costs of operating equipment in the lithographic industry?

(Economic hourly costs on all equipment, together with production standards and other pertinent information sent member.)

9. Can you furnish us with the Union wage scales for New York, Philadelphia, Chicago, etc.?

(Information sent to member.)

10. We are large buyers of photo-lithography in New York. Will you give us the names of photo-lithographers in other cities so that our subsidiaries can use the process?

(Information sent to buyer. Many requests of this kind are received.)

11. One of our customers has asked us to deliver plates from a job we ran three years ago to him. Who owns the negatives and plates, must we comply with the buyer's request?

(Trade practices adopted by the Association with case histories in court actions furnished member.)

The Monthly Association Bulletin sent members carries much helpful confidential information.

You can join the Association under a very low cost. Minimum dues are \$25.00 per year. Maximum \$250.00. Exact dues per firm are based on press equipment in the plant.

For further information write listing your press equipment to

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS

1776 BROADWAY

NEW YORK, N. Y.

Never misses

If you strive for perfection in your production, make certain your material is as keen and true as your aim. F. & L. inks have made their mark in the pressrooms of every outstanding lithographer. You can't miss getting best results when you use flawless inks.



CHIEFTAIN YELLOW

TARGET RED

ARROW BLUE

CHAMPION BLACK

THE FUCHS & LANG MFG. COMPANY
ESTABLISHED 1870
GENERAL PRINTING INK CORPORATION
DIVISION
100 Sixth Avenue, New York

BOSTON
CHICAGO
SAN FRANCISCO

CINCINNATI
FORT WORTH

CLEVELAND
LOS ANGELES

PHILADELPHIA
TORONTO, CANADA

ST. LOUIS

*Ever since the
stone age*



*Everything for
the Lithographer*



*Tweet!
Tweet!
Spring
is here!*

YOU'VE probably never given it a thought before, but Spring comes to the pressroom, too, just as it blossoms forth in a blaze of purple and yellow glory along the Avenue des Cygnes in not-so-gay Paris this year. It comes even to the black and ebony depths of the silent and shadowy darkroom, stirring a whisper of dust that has been gathering since the last autumnal equinox. Marked by shorter and shorter shadows, it moves across the thresholds of creative and executive offices into hundreds of litho plants up and down the land, scattering the pent-up, sluggish, steam-heated air of a long winter, and touching with new sun-

light, files, ideas, projects and correspondence that have been waiting for fresh energy to transform them into living ideas.

Spring comes to the lithographic industry! And as it must to every man who is alive, Spring comes bringing new ideas, new life, new plans, new promises. In that fertile, receptive state of mind, anything that helps to organize, assemble, shape, define and give concrete expression to the welter of half-formed, vague but provocative thoughts and ideas that come tumbling pell-mell, without rime or reason, into every craftsman's and executive's brain in the Spring will be as a boon, heaven-sent.

Such a heaven-sent boon to the busy lithographer in the Spring (or any season) is MODERN LITHOGRAPHY. Its pages each month contain the latest information about litho markets, promotional trends, and developments in litho inks, offset papers, platemaking and camera operation.

It's published for you, Mr. Lithographer. Your trade paper. Face the thing practically: Don't you think your investment of \$3 a year, which is the subscription price for 12 issues, would be mighty well spent even if you got only *one good idea* a year out of its pages? (And that's being mighty modest on our part, sir, *mighty modest!*) Certainly, you don't need but a second to think that over, so fill out the blank below without another moment's hesitation and join the ever-swelling ranks of MODERN LITHOGRAPHY subscribers!

MODERN LITHOGRAPHY
254 West 31st St. New York City

Send me MODERN LITHOGRAPHY every month for a year. Mail me invoice for \$3.00 to cover — Foreign and Canada \$4.00.

Name

Company

Address

City Country

Type of Business Position

RELIABLE LITHOGRAPHIC PLATE CO., Inc.

The Pioneer Plate Grainers of America

ALL PLATES
INCLUDING THOSE
REGRAINED FOR
MULTILITH
ARE MARBLE
GRAINED

"RELIABLE" is far more than just part of our name. It means to our customers that our plates can be depended on to give first-class results because from start to finish the graining is handled by experts of long experience. Our plates are made right to work right—they are reliable!
We carry a full supply of Zinc and Aluminum Sheets for Offset, Rotaprint Presses, in fact for all the lithograph trade.

MILL
SELECTED
METAL
USED
EXCLUSIVELY
(MADE IN U.S.A.)

A trial order should "sell" you our services and products.

RELIABLE LITHOGRAPHIC PLATE CO., Inc.

INCORPORATED 1916

17-27 Vandewater St. and 45 Rose St., New York, N. Y. • Phone: BEekman {3-4542
3-4531

A CRAMER PLATE

SUPER CONTRAST

PANCHROME

ALPHA

CRAMER "25"

FOR
EVERY

Reproduction
NEED

CRACO LITH

CONTRAST

ISO

PANCHROME
PROCESS

G. CRAMER DRY PLATE CO.

New York

ST. LOUIS

Chicago



"I understand the smart letterheads are going on *Permanized Papers* these days."

1.



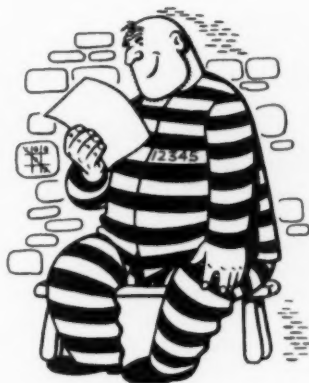
"I see something very white and most attractive that will be a big help in your printing business."

2.



"My husband says he's through being a dummy. He's standardizing on *Permanized Papers* from now on."

3.



"It says I should use *Permanized Papers* for my letterheads if I want to impress people."

4.

Permanized

PLOVER LINEN BOND
OLD RELIABLE BOND
INTERNATIONAL BOND
ARTESIAN BOND
SYSTEMS BOND
REDEMPTION BOND
MAJOR BOND
OPAQUE BOND

WHITING-PLOVER PAPER COMPANY

STEVENS POINT, WISCONSIN

Exclusive manufacturers of

Permanized RAG - CONTENT
BOND - LEDGER - THIN *Papers*

NEW YORK OFFICE & WAREHOUSE: 71-73 MURRAY ST.

Looking for the information that will give you a sharp insight on the real secrets of making quality Rag Content Bonds and Ledgers? Write for a copy of the booklet that unfolds a brand new concept of the proper way to give the customer what he wants in paper. Ask for a copy of—"BALANCE - PAPER'S INTANGIBLE INGREDIENT."

Permanized

OLD RELIABLE LEDGER
ARTESIAN LEDGER
SYSTEMS LEDGER
AMITY LEDGER
★ ★ ★
PLOVER ONION SKIN
LAWYER'S ONION SKIN
AMITY ONION SKIN

CONDENSED STATEMENT OF THE CONDITION OF THE

New York Printers & Bookbinders Mutual Insurance Company

147 FOURTH AVENUE : : : : NEW YORK, N. Y.

Statement as of December 31st, 1939

ASSETS		LIABILITIES	
Cash		Loss Reserve	
On deposit with Bankers Trust Company, et al (except for \$25 in company's office).....	\$53,578.45	Set aside as required by law to meet future payments due or which may become due (including estimated expenses of investigation and adjustment) on all accidents which occurred prior to date of this statement.....	\$184,161.91
*U. S. Government Bonds		State Industrial Commission Expense	
Equivalent to over 63% of all Bonds & Stocks held....	386,009.86	Estimated amount hereafter payable to New York State Industrial Commissioner, for expenses of administering the Workmen's Compensation Law.....	16,368.26
*Other Bonds and Stocks		Unearned Premium Reserve	
Includes less than 1% of common Stock.....	225,655.88	Pro rata portion of premiums unearned on policies which have not expired. For example: a premium for a \$100 policy has six months to run; half the year's premium, or \$50, is set aside as not yet earned.....	144,912.29
Mortgages		Other Liabilities	
First Mortgage Loans on improved New York City real estate.....	44,490.00	Salaries, Taxes, etc., due but unpaid as of date of this statement.....	10,265.92
Real Estate		Contingency Reserve	
Acquired as a result of foreclosures.....	43,751.26,	Representing difference between total values carried in assets for all bonds and stocks owned and total values based on December 31st, 1939 market quotations....	3,140.74
Premiums in Course of Coll'n		Dividend Reserve	
Due the company on policies just issued, excluding any premiums on policies more than ninety days old.....	94,460.81	Set aside to meet future payments on unaudited policies expiring up to and including Dec. 31, 1939.....	23,504.38
Deposit in Mutual Corporations Reinsurance Fund			\$382,353.50
On deposit jointly with moneys of other mutual companies, to be used in the event of a catastrophe loss—total in fund, \$379,911.35..	14,651.86		
Interest Accrued, etc.			
Interest earned to date, payable within the next six months.....	3,253.30		
	<u>\$865,851.42</u>		
SURPLUS.....			<u>\$483,497.92</u>

*Bonds and Stocks valued on basis prescribed by the New York Insurance Department.

Reinsured against any one loss, without limit, in excess of \$10,000.00.

Present rate of dividends to policyholders 25%

... Reduce the Cost of Workmen's Compensation and Automobile Liability Insurance

INSURE with a financially strong company
owned and operated by its policyholders . . .
A mutual company specializing in the field of the
Allied Printing Trades . . . A company which has
paid back more than \$1,058,000.00 in dividends
to its policyholders since its organiza-
tion in 1914. Present dividend rate **25%**

THE COMPANY AT A GLANCE

	Premiums Written	Assets	Surplus
1939	\$351,743.56	\$865,851.42	\$483,497.92

Total Premiums Written Since Organization in 1914

\$4,603,425.53



New York Printers & Bookbinders Mutual Insurance Company

147 FOURTH AVENUE : : : : NEW YORK, N. Y.

Telephone GRamercy 7-6530

G. Frederick Kalkhoff, President

C. F. von Dreusche, Sec. and Gen. Mgr.

OFFSET
GRAINING
COMPOSITION
ROTOGRAVURE
NON-MELTABLE
FABRIC-COVERED
NATURAL RUBBER
SYNTHETIC RUBBER
VARNISH & LACQUER
ROLLERS

SAM'L BINGHAM'S SON MFG. CO.

—CHICAGO—

**ATLANTA
DALLAS
ST. LOUIS**

**CLEVELAND
HOUSTON
MINNEAPOLIS**

**NASHVILLE
INDIANAPOLIS
PITTSBURGH**

**DES MOINES
KALAMAZOO
SPRINGFIELD, O.**

**DETROIT
KANSAS CITY
OKLAHOMA CITY**

EDITORIALS

DISPARAGEMENT of the legitimate effort of a lithographic plant to go after new business is one of the last things we, or anyone else, should ever be guilty of. Too few and far between are the firms which promote the use of lithography by offering the buyer reasons why he should use the process other than that they just happen to be in the business of producing it. The firm that has nothing to offer the buyer but a willingness to take his order and send him a bill at the end of the month is so much dead wood in an industry which needs constantly to promote itself, whether through finer quality, better service or a more economical price.

However, though we have nothing but unreserved praise for the enterprise and progressiveness of a litho concern which offers the buyer something over and above the bare finished job—a plus value in the way of merchandising service, or market research, or a continuity program mapped out to serve his specific advertising needs, or a consulting service organized to advise him expertly on the handling of his job—at the same time we have certain reservations about the discretion which a lithographer should exercise in offering his customers a so-called 'plus' service. For example, there has come to our attention the case of a litho concern which has just announced a 24-hour service on all black and white line work, at no extra charge, to *all* of its customers. Naturally, the purpose in back of such a move is to make a bid for volume business. It's a perfectly reasonable and legitimate purpose and we respect and admire the motive which prompts it. But we do strongly question the wisdom of offering a blanket service of this character to all customers, and at no extra cost to the customer.

Of course, we assume that a concern that says it can give 24-hour service to its customers at no extra charge knows what it is about. We assume that it has made a careful study of the problem before-hand and knows what it must do to operate at a profit. We assume that it has provided for the peaks and valleys in the production curve to which such a program is liable, that it has made due allow-

ance for a possible high labor turnover cost, and for overtime costs, and has established careful quotas for its salesmen based on the new program. True, if there is a cost differential involved—and to all outward appearances it looks as though there is here—then there should also be a price differential. But never mind about that, let's assume that if a firm feels it can offer such a service at no extra cost it knows what it's doing.

But, and it's a mighty big but, too, there are other factors to be considered. In the first place, whether a concern which offers 24-hour service thinks it can control it or not, there will be a tendency on the part of all customers, whether they absolutely need it or not, to ask for and expect 24-hour service on all jobs, and from every lithographer. The result will be a needless waste of effort and needlessly higher costs. Every Tom, Dick and Harry will want his work in 24-hours, whether it's an order for \$5 or for \$500. What is worse still, the quality of the lithographed product is sure to suffer. There's enough inferior lithography being produced as it is, unfortunately, without encouraging more, providing the letterpress printer with additional samples of what he so dearly loves to term "substitute" printing. No, let's go after more business, but let's do it in a way that will not injure the industry as a whole, or lower the quality of lithography. Let's keep competitive standards high. Let's offer the buyer a 'plus' service, not indiscriminately, but one based on an intelligent study of his individual needs.



A GAIN, may we remind you that you have a date at Del Monte, California, on June 4, the opening day of the Lithographers' National Association Convention. As the advance report of activities indicates (page 38 of this issue), Western Hospitality will be dealt out in generous portions.



What advertisers are buying in the way of printed literature for distribution in the elementary schools.

THE so-called Consumer Movement has, within recent months, created a vaster market for the lithographed product among the elementary schools. Leastways, it has created a vaster market for printed literature and there is no reason on earth why a goodly share of this material, if not all, could not be lithographed. Don't misquote me: I said there is no reason why it could not be lithographed. I didn't say it should be. That's the lithographer's problem, just how much of it will be, within the coming year, turned out by the litho process.

There is a Consumer Movement on. The Consumer Movement has its points, but on a number of counts it is badly misinformed. Some of the textbooks, information, courses, etc., found in our elementary schools

is evidence of how badly misinformed this Consumer Movement is.

There are 240,000 elementary or grade schools in this country to which each day 20,000,000 school children go. Knowing how impressionable these children are, some sections of the Consumer Movement, worse informed than others, have tried to prejudice the school-child's mind by giving out erroneous information about advertising and its functions. There is no need to dwell on details and examples of the type of misinformation. You who read in these pages the talk given at the LNA convention last summer by C. R. Dickinson, of *Printers' Ink*, titled "Let's Take the Offensive," know what kind of misinformation I refer

to. Generally, it is the sort which condemns all advertising.

The national advertiser has taken arms against this sea of trouble and launched a counter-offensive in the form of hundreds of thousands of dollars worth of printed literature giving the truth about advertising and correct information about advertised products. There is no reason at all, I repeat, why this literature could not all be lithographed.

In our 240,000 elementary or grade schools there are 20,000,000 alert receptive youngsters taught by 670,000 teachers. These children are at the most impressionable period of their lives, from 6 to 14. This is the formative period. That is why anti-business activities have been so active

through educational channels. While much propaganda detrimental to business has been widely circulated in our schools, through teachers, textbooks, lectures, pamphlets and guinea pig booklets, it has only been recently that advertisers have taken notice of the movement. They have been too occupied with their own problems to do anything to offset these undermining activities. Most of us in the advertising business have had no idea that millions of school children were being taught that advertising is a bad thing for the consumer, a sort of racket that ought to be curbed or eliminated. Then, suddenly we discover that our children are learning in school that the advertising business is a kind of parasite on the economic life.

Many business men who have talked to teachers and students in our schools where youth has been exposed to subversive teachings realize that if they are to stem the tide of misunderstanding regarding business and advertising, they must strike while the iron is hot. Then, too, the stork keeps on producing new customers for business at the rate of 6,000 every 24 hours. With the annual birth rate far above the two million mark, 245 potential new customers are born every hour and during that same hour, the old customer list loses 120 names because deaths occur at the rate of two every minute. Business must win over these youngsters if sales are to be maintained at the old volume. The sales parade is a fast moving target that demands constant education of new customers.

The ideal thing, of course, would be for every national advertiser to take every teacher with all of his students on a personally conducted tour through the advertiser's factories, explaining every process of manufacture, showing the care and cleanliness used, the study and research that preceded the development of advertised products, and how they are distributed through national advertising and sales promotion. Fact-finding trips of this nature have long been recognized as an important means of helping children to discover that the needs of daily life are met through the inter-dependence of hundreds of

of people—from farms and factories to retail outlets, and finally to the ultimate user. However, since it is physically impossible to do this, the next best thing is to do it by the printed word.

To encourage this type of activity in our schools throughout the country, the *Instructor* magazine, for example, as inaugurated a new department devoted to descriptions of such field trips so that teachers, students and parents may be stimulated to further investigation activities. Trips of this type, through first-hand interviews, give children a wealth of factual knowledge, and help to bring about a better understanding between consumer and producer.

STIMULATED by the encouragement and help of the *Instructor*, and in line with the current policy of the advertiser to help educate children in the elementary schools regarding

business, distribution, merchandising, advertising and its functions, a steady stream of printed literature for use in the elementary schools has been produced during the past year and a half. In order to review the type of literature being used and how, the following thumbnail sketches of the activities of a number of advertisers are related. These few case histories are not by any means complete, but are representative. They may serve to remind the lithographer that he may be able to suggest similar elementary school activity to his clients.

The American Can Company by means of booklets, pictures, lessons, charts and maps, is offering teachers a steady flow of visual educational material regarding the salmon industry, the coffee industry, the pineapple industry and others. This material is not only being offered to the schools, but is also being used.

The United Fruit Company is distributing beautiful lithographed edu-

Challenged by biased and oftentimes misinformed school textbooks which relate only one side of the picture, the advertiser is telling his version of the part advertising has played in the U. S.'s business and industrial life, through educational literature, booklets, maps, charts, pictures, poster stamps, etc., to the schools. Teachers appreciate the material because it helps them. Pupils like it because it's entertaining as well as instructive.

Franyo-Farkas
Photo



cational posters for use on classroom walls all over the United States urging the use of bananas and milk together as "good teammates." The poster, prepared as a visual aid in teaching good food habits, is lithographed in eight colors.

Bristol-Myers Company is offering a striking health chart lithographed in full-colors to help teachers in their classroom drills in gum massage. The chart is entitled "Why Do Teeth Ache?" It shows in colorful pictures how the teeth function, a cross-section of a sound tooth and of a diseased tooth, and explains with pictures why gums need massage. The Britol-Myers message, not unselfishly, urges the teachers and students as follows: "Every time you and your pupils clean your teeth with Ipana, rub a little extra Ipana into the gums." Of course, it sells lots of Ipana.

Lever Brothers, soap manufacturers, have distributed close to 25,000,000 Lifebuoy Wash-Up Charts to the school children, with the idea of making washing behind the ears a game instead of a chore. The Pepsodent Company is offering teachers booklets, circulars, etc., also about the care of teeth. This literature is in the form of a complete Oral Hygiene Teaching Unit designed to abolish the shocking ignorance which still prevails about teeth and their care. It contains authentic dental facts to awaken in students a genuine interest

and concern over the appearance and health of their teeth. The advertiser points out that it is definitely not an attempt to bring advertising into the classroom, and that it can be used without mentioning either the product which sponsors it or the company, since both are omitted from the chart.

McKesson & Robbins are distributing fascinating charts showing children how to use tooth powder. Standard Brands, in the interests of Fleischman's Yeast, are currently sponsoring a program to the schools designed to encourage millions of children to eat more bread. A very successful plan which has been extensively used by nearly 50,000 teachers and millions of children is the Heinz Modern Aviation Map in ten colors with picture albums for each pupil. This map measures 32" x 42" and consists of complete material for a project to be carried on in the classroom on the subject of air transportation. Pupils are offered airplane or pilot albums in each of which are spaces for about two-dozen full color portraits of modern planes and well-known pilots. One picture, it is explained, is available in every package of Heinz Rice Flakes and Breakfast Wheat. When secured, these small pictures are pasted in the albums. The merchandising tie-up is neat and effective.

Curtiss Candy Company, in the printed literature it is distributing

about its product, Baby Ruth, points out that it is rich in Dextrose and so is more than just a candy, but is also an energy-supplying food. By means of a chart, based on laboratory analysis, interesting comparisons are offered. Swift and Company, besides giving away recipes, tell a delightful story for school consumption in picture form showing "Pigs in Progress . . . or the Story of a Ham." The story is generously illustrated with pigs in clover, pigs in the pen, U. S. Government inspectors at work, oven-smoked products, and the final product as it appears on the breakfast table. Armour and Company, by the use of many illustrations, describe in detail the Armour meat-curing and packing processes, how cuts are selected, spices ground, and packaging and shipping operations.

The list could be magnified many times. These are only a few. But the point is, the possibilities in the school field where the audience is unspoiled, eager and ready for information, are unlimited. Business, and its hand-maiden, advertising, is being given an opportunity to tell its side of the story to educators and their pupils. Advertising is shown to be essentially honest and economical. By means of maps, charts, booklets, stories, folders, posters and other devices the complete story and history of the advertised product is described in a convincing manner.

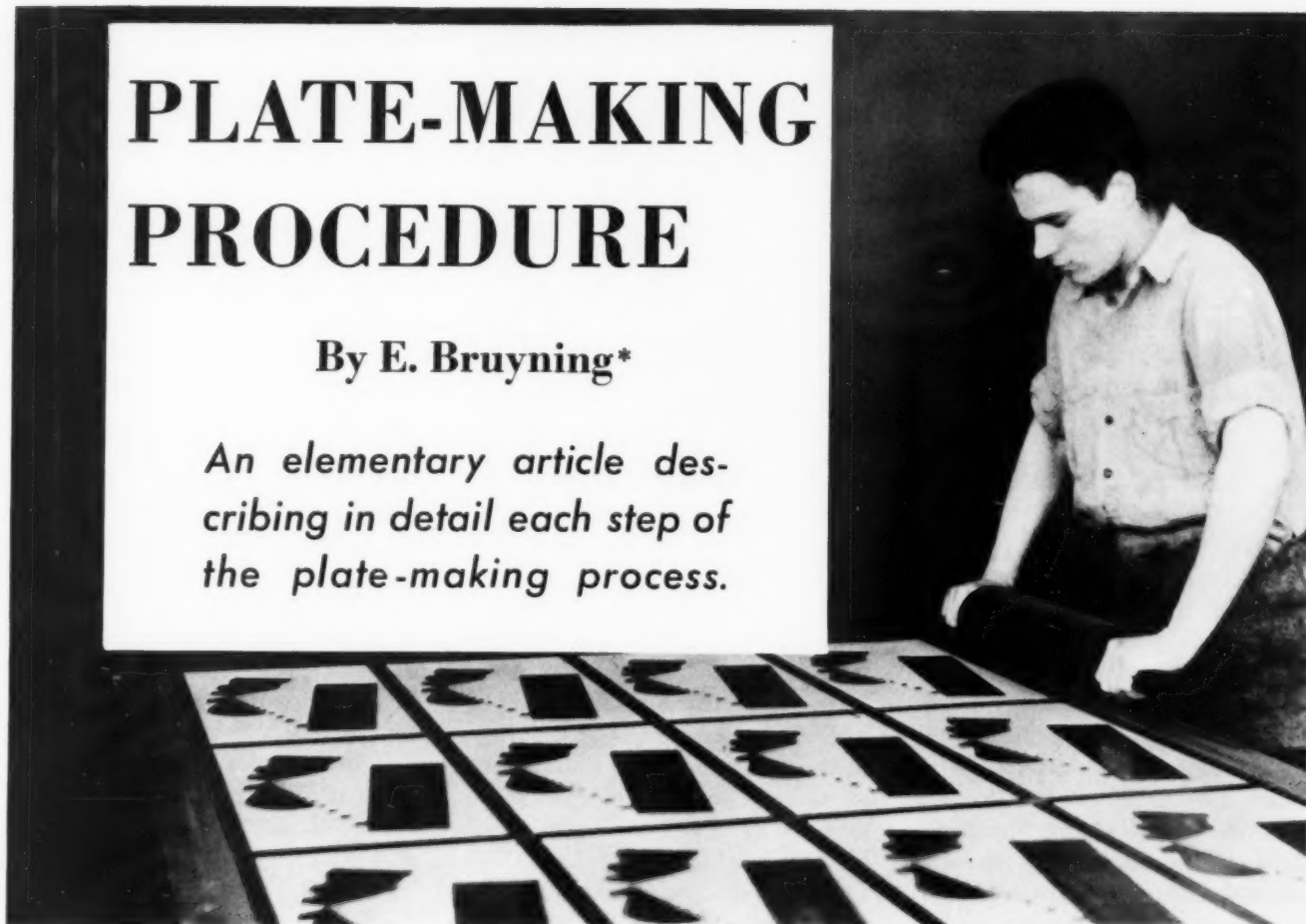


*Franco-Farkas
Photo*

PLATE-MAKING PROCEDURE

By E. Bruyning*

An elementary article describing in detail each step of the plate-making process.



FUNDAMENTALLY, platemaking is very simple. It consists of putting a suitable film of light sensitive material on a prepared sheet of metal, properly exposing it under a negative to light, and then giving it the necessary after-treatment in order to make the exposed part ink receptive. In actual practice, the procedure is not quite as simple, but subject to many pitfalls. The very words "suitable film," "proper exposure," and "necessary after-treatment" indicate that the process can be subject to many variations.

However, we shall describe the entire process in detail, point out all the difficulties, and give the proper methods to secure a good working plate.

Preparation of the Plate

If a plate is not used immediately after it has been grained, it becomes encrusted with an excessive amount of metallic oxide, part of which is very loosely attached to the plate. The loosely attached part of the oxide film

prevents the formation of a firm bond between the coating and the metal sheet, and must therefore be removed so that a durable plate can be made. The removal of this oxide film is called counter-etching and is done with a weak solution of a strong acid, or a relatively strong solution of a weak acid. The latter is preferable because small variations in strength are not quite as important. Acetic acid, for instance, is a weak acid, and a 6 ounce solution of this acid to a gallon of water should be used. In the case of a strong acid, as for instance hydrochloric acid, 1 ounce to a gallon of water makes a good working solution.

The actual counter-etching is done as follows: Scrub the plate thoroughly with a stiff brush to remove all loose dirt, and in cases where the surface of the metal is greasy, the grease and other oily impurities should be removed with a cyanide solution made by dissolving 30 grains of sodium cyanide in 32 ounces of water. After the plate has been well scrubbed, it

should be liberally rinsed with water. Flush the plate with the acid counter-etching solution, allow it to act for a few minutes, while gently scrubbing it with a soft brush, and then flush thoroughly with water. It is customary in some shops to use a very stiff brush with the acid solution. This procedure is not recommended inasmuch as it removes the so-called "tooth" of the grain. Excessive scrubbing is unnecessary. It has been shown before that the undesirable feature of the layer of oxide is the fact that the greatest part of it is loosely attached to the plate and prevents the firm adherence of the coating. That part of the oxide film which is firmly attached to the metal does no harm. It is practically impossible to clean the metal to such a degree that no oxide remains, because as fast as the last vestige of oxide is removed, a new thin new layer forms instantly.

Pre-Etching

The metals commonly used as plates in lithography are zinc and aluminum.

*Techno-Chemical Products, Inc., New York.



These metals have the peculiarity of combining in some obscure manner with the coating solution when they are fairly clean, and make development difficult. To alleviate this condition, a film of another medium is first placed over the plate before the coating solution is poured onto the plate. The normal plate etch is a suitable medium. After the plate has been counter-etched, apply a generous quantity of the plate-etch solution with a soft camels hair brush over the entire plate. Allow it to act for a few minutes and then flush it thoroughly with water. It is sometimes necessary to use a soft brush to make sure that sufficient of the plate-etch solution is removed.

What actually happens is that an excessive thin film of the acidified gum of the plate etch remains on the metal and prevents the coating solution from adhering too firmly to the parts of the plate that have not been exposed to the action of light. This process is called *pre-etching*. It is not commonly used in the average shop, but its advantages are so obvious when the technique has been well mastered that it is recommended as a regular step in platemaking.

Coating

Coating is by far the most important operation because the action of the plate on the press depends for the greatest part on the merit of the sensitive film that is made during this operation. The coating solution is a dispersion of a solid in water with the addition of a solution of a sensitizing

medium, usually ammonium bichromate. The amount of solid which is dispersed in a unit weight of water, the speed with which the plate is whirled while drying, the amount of moisture left in the film after drying, determine the ultimate thickness of the sensitive film. If the film is too thick for some of these reasons, it becomes excessively sensitive to the action of light, and when normally exposed, becomes excessively brittle which usually results in a so-called blind plate, a plate that is not very ink receptive and does not print evenly on the press.

If the film is too thin, it is usually also too sensitive, and in addition to all the above troubles, it is difficult to clean during development and may result in scumming.

The actual operation of coating is as follows: The counter-etched and pre-etched plate is placed while still wet on a whirler, which revolves about 60 R.P.M. The coating solution is poured slowly and close onto the center of the plate while it is revolving, until the entire plate has been covered with the coating solution. It is then permitted to dry while still whirling. The application of heat is in some cases of some advantage. The plate should be allowed to dry for twice as long a time as it took for the edges to dry, i.e.,—if the edges took ten minutes the total drying time should be twenty minutes. It is most important that a plate should be thoroughly dry, then can plate making be standardized.

The usual plate coating solution consists of:

Water	32 oz.
Albumin	3 oz.
Ammonium Bichromate	1 oz.

Sometimes sufficient ammonia is added to change the color from orange to yellow.

Albumin lacks very much to being the ideal coating. It lacks uniformity, is very hygroscopic (subject to variations in humidity), and the finished coated film is as a rule too soft for long runs. Many attempts have been made to obtain a more suitable coating medium, and only lately have the attempts been successful. There are now synthetic substitutes for albumin obtainable that are far superior to albumin, but the average lithographer is hesitant to try them, because he remembers too well the many failures of the earlier substitutes. The writer started experiments to replace albumin as a coating medium more than six years ago, and not until about a year ago did he succeed in finding a suitable substitute which had all the advantages of albumin and practically none of its disadvantages. Correspondence is solicited as to the details of this new sensitizer.

Exposure

AFTER the plate has been thoroughly dried, it is exposed to light in a printing frame under a negative. The amount of exposure necessary will depend upon the amount of ammonium bichromate, the nature of the coating solution, the remnant moisture in the film, the intensity of the light and the quality of the negative.

Let us take each one of these items separately. The greater the amount of the ammonium bichromate, the more sensitive the coating, within limits. Large amounts of ammonium bichromate have the disadvantage of being difficult to clean while developing, while small amounts result in excessively soft images on the plate. The various colloids that are used as coating media have their own characteristics as to the length of exposure they need. The greatest variation in exposure time is caused by the remnant moisture in the film. Bear in mind that this film is never absolutely dry. There is always a certain amount of water left in the film. A thoroughly dry film still con-

tains about 8 per cent of water. The remnant moisture is difficult to control, because if the colloid is hydroscopic it will absorb moisture from the air if the humidity is high, and the ideal dry condition can never be obtained. This factor is the main reason that has justified the search for substitutes for albumin.

The light intensity and the nature of the negatives are factors that can be readily controlled. If a standard arc light with constant voltage supply is always kept at a definite distance from the printing frame, the results will be uniform from this factor. In the average lithographic plant the negatives are fairly uniform, and therefore do not cause great difficulties.

In closing this particular step in plate making, we do not believe it is amiss to point out that the length of exposure should be maintained constant, even if the troublesome factor of remnant moisture is changeable with humidity. The faults should be corrected in the preparation of the coating solution. By very simple experiments the water content of the coating solution can be varied for the prevailing humidity to give constant exposures. The more humid the weather, the less water and less ammonium bichromate should be used. The actual quantities to be used can be easily determined by experiment.

Inking

After the plate has been exposed, it should receive special treatment in order to make it ink receptive. Heretofore it has been customary to apply a developing ink over the entire plate at this stage. Recent developments in lithography, however, have shown that a more durable plate can be obtained if a special lacquer is applied to the plate prior to the developing ink. Proceed as follows: A small quantity of special lacquer (obtainable under various trade names, such as ink base, intensifier, and proper names) is poured onto the plate and then thinly and evenly spread over the entire plate by means of a small piece of rag. It is very important for the distribution to be even, otherwise the resulting plate will be very streaky. Do not apply too much, as this will make the plate too tacky. Use just enough to cover

it thoroughly and dry it with a fan until it feels dry to the touch, and never sticky. After this lacquer film is thoroughly dried, a small quantity of developing ink is poured on the plate, and with a rag, piece of felt, or a wad of cotton, evenly distributed over the entire plate. The developing ink should be well rubbed on until dry. In most cases it will appear gray instead of black.

It is very important to make sure that the developing ink is dry before the plate is developed. This can be tested by touching the plate at any point with the finger, and making sure that the finger is not smudged. It is always best to end the operation by fanning it dry with a hot air fan.

Developing

The plate is now in a condition to make the image visible, which is called developing. The best method of developing is to place the plate in a trough of plain or faintly alkalinized water made by the addition of a small quantity of sodium bicarbonate. The addition of 2 oz. of sodium bicarbonate to a gallon of water makes a suitable developing solution. Allow the plate to remain submerged in the solution for a few minutes without handling it. Then remove it and place it in a sink, pouring a steady flow of water

over it, and at the same time rubbing it with a wad of cotton until it appears thoroughly clean. In shops where troughs are not available or the plate is too large to be handled in this manner, development is effected by allowing water to flow over the entire plate for a few minutes, until the coating is sufficiently swollen and then to commence developing with a wad of cotton until the unexposed parts are thoroughly clean.

In some cases it will be found that during development the developing ink rubs off the image. This can be caused by one or two things: either the developing ink is unsuitable for use with an alkali, or the image is so hard that the developing ink refuses to adhere to it. By reducing the exposure in subsequent plates, the latter factor can be easily checked. If a plate develops too easily, the fault is usually underexposure. And if the development is too difficult, either the exposure should be reduced or the coating solution modified. Development is one of the best criterions of exposure.

Plate Etching

AFTER the plate has been developed, the areas which have not been

(Turn to page 61)





Characteristics of Offset Papers

By Edson S. Dunbar*

DURING the past few years offset paper has been cussed and discussed probably more than any other paper on the market. As a result, such terms as wavy edges, static, picking, stretching, and seasoning have become a definite part of the language of the paper salesman and mill production department as well as of the offset lithographer. This has been due largely to the rapid and unprecedented increase in popularity of offset as a printing process.

The latest census report shows a large increase over the previous one in the number of lithographic plants operating in the United States. In addition there are many more commercial and private printing plants that are gradually supplementing their present letterpress equipment with offset presses and cameras. Offset lithography is spreading rapidly, but as yet 90 per cent of the offset work is produced in ten states, ranking in the following order: New York, Illinois, Ohio, California, Pennsylvania, Massachusetts, New Jersey, Missouri, Michigan and Wisconsin. Several of the larger manufacturers of printing equipment have recently gone into the production of offset machinery. Ink manufacturers, who until recently,

have standardized only on printing inks, have gone into offset inks in a big way. This will give some idea of the rapid progress being made in the offset field.

In the meantime, paper manufacturers have not been asleep. They have been conducting experiments and have endeavored to make paper that would run smoothly, economically, and efficiently on modern offset presses. They have been fairly successful but there is still room for improvement.

What, then, constitutes a real good offset paper? Here are the three major requisites: (1) pliability; (2) surface; and (3) moisture content. In the first place, a good offset paper must be pliable. It must be firm but not hard or tinny. As one well known paper expert expressed it: "Offset paper must be mellow on the inside but firm on the surface." This pliability sets offset apart as being distinctly different from the softness of antique book paper and the hard

firmness of bond and ledger papers. It seems to embody both of the characteristics of these papers.

Second, the surface of an offset paper must be right. It must be free from "whiskers" or surface fibres that stand up on end. These "whiskers" tend to cause picking or linting on the moist rubber blanket, making it necessary to stop the press frequently and wash up. This is naturally expensive as it slows up production.

Third, offset paper must be made with the right moisture content so as to adjust itself quickly to the press-room conditions where it is to be run. This insures against wavy edges, curl, static, and cuts down on the length of the seasoning period and minimizes trouble from stretching. In addition to these three major requisites there are many more desirable features sought for in offset paper. These are color, finish, cleanliness, opacity and affinity for ink. These are more or less matters of personal choice or preference, but the first three have a

Three principal requirements of all good offset papers, namely, pliability, surface, and moisture content are discussed for the guidance and instruction of the buyer.

*Sales Promotion Manager, Crocker-McElwain Co.

definite bearing on the cost and production of offset printing.

Going back to the pliability of offset paper, this peculiar characteristic is built right into the paper while the pulp is still in the paper mill beaters and as it flows over the fourdrinier wire. The length of fiber and the manner in which it is formed in the web gives the sheet its pliability. Naturally, the fibers are longer than they are thick, and as they flow onto the machine they lie in the general direction of the machine. This determines the grain of the sheet. For offset work the grain should be the long way of the sheet so as to parallel the cylinder of the offset press. This accentuates its pliability and it conforms closer to the cylinder, enabling the pressman to better control close register and turn out better work. In selecting offset paper give your careful consideration to a sheet that has a "mellow" feel.

When it comes to surface, the average layman will say that offset can print on rough surfaces as well as on smooth. They usually refer to a plater or embossed surface that may seem very uneven or rough to them, yet in reality it is perhaps smoother to the press than some regular vellum finishes. In discussing surface, let us take first the real surface of the paper before it is finished. Under a magnifying glass the surface will appear to have little hills and valleys. Unless made properly, on some of these hills little fibers will stand up and look like whiskers. These are the little trouble makers which form lint on the blanket, cause white specks to appear on the print and make it necessary to stop and wash up the press after a few impressions. Usually on offset papers that are tub- or surface-sized this trouble is not so prevalent. Surface-sizing glues these whiskers down and makes for fewer wash ups and better results all around.

Of course, unless a rough antique surface is desired, most offset papers are run through calenders which put a smooth even surface on the paper. This process eliminates the hills and valleys but it does not shave the whiskers off the sheet. In recent months there has been a tendency towards the

high smooth finish for offset paper. The reason for this is probably to secure comparable results to the fine screen halftones produced on coated paper by letterpress. In this connection also, coated offset papers have begun to get more recognition than was the case several years ago. The high smooth finish on uncoated offset papers will not respond to lacquer or varnish and will not bring out the best in the new high gloss inks as will coated papers.

BECAUSE of the resilient rubber blanket, irregular surfaces can be printed by the offset process. These irregular surfaces are usually produced by pressing cloth of varying patterns into the paper under tremendous pressure on the plater machines in the paper mill. Another method is to emboss designs into the paper on an embossing machine. By this method the paper passes between steel rolls or steel and rubber rolls. The pattern has been engraved on one of the steel rolls and is simply squeezed into the sheet. On these so-called special finishes the entire surface has been finished although some parts are more highly polished or depressed than others.

In buying offset paper it is possible to check its pliability and test its surface before going ahead with a job. The moisture content, on the other hand, is not so easy to determine. The moisture content is a thing that is up against constant change and is probably the greatest headache for both the offset printer and the paper mill. If a mill knew in advance the exact temperature and humidity conditions under which the paper would be run it might come pretty close to getting the correct moisture content in its paper for that particular plant. There are still only a few printing plants that can accurately control their temperature and relative humidity, and although a lot of them claim that their plants are humidified, they are still far from being accurate.

Then too, this specially controlled moisture content in offset paper might apply to some large special making order, but when it comes to paper taken out of stock the picture is entirely different. Paper made in the

warm humid dog days of July and August might react the wrong way if it was offset during the clear, cool weather of October or November. And vice versa, paper made in the cold frosty January weather might not perform so well in the balmy days of April and May. Atmospheric changes from the time a paper is made in the paper mill until the last impression is completed on the offset press are constantly working on that paper and causing it to take on or give off moisture. Relative humidity is just as important as some of the characteristics built into offset papers themselves.

In the past it has been the practice of the lithographer to season offset paper, and this is still being done today. There are several ways of seasoning paper. The most common is to store the paper on skids or in piles for several weeks right near the pressroom where it is to be run. The second is to dampen the paper and store it in open piles. The dampening is done in several ways, by spraying the surface with a fine mist, direct contact with the surface from a wet felt or wet roll or by a brush spray. The third and perhaps quickest way to season offset paper is to hang or rack the paper so that each individual sheet becomes acclimated to the atmospheric conditions in the pressroom where it is run.

Some mills are even shipping their paper in moisture proof wrappers to seal the moisture in the package until ready for the press. They assume that the moisture they put into the paper in the mill will meet the requirements in the pressroom. This method has proven successful in some cases, but as soon as the wrapper is removed the mill has no guarantee to the offset printer that the atmospheric conditions in his plant will not change from one impression to the next. In fact the offset paper may have been made with a specific moisture content when it was packed at the mill, and may have retained that moisture content for the first time through the press, but the amount and characteristics of the ink, or the drying devices on the press, or the slight change in pressroom conditions between the first and second time through the press might cause that paper to take on wavy edges or to stretch slightly and throw



Paper seasoning room at Forbes Litho plant, Boston.

the job out of register. When it comes to offset paper this matter of relative humidity is a mighty important factor.

WHAT is relative humidity? Relative humidity is the percentage of saturation in any unit of air. The amount of water that a cubic foot of air will contain when fully saturated varies with the temperature. The capacity of the air for carrying moisture increases very rapidly with the temperature out of all proportion to the increased temperature. Therefore, of course, air which is saturated at a low temperature is not anywhere nearly saturated at a higher temperature. When you measure the moisture in the air you compare it with the amount that it would carry saturated, so when you say 60 per cent relative humidity you mean at that temperature it carries 60 per cent of the moisture that it could carry if it was saturated.

The definition as outlined in the preceding paragraph was taken from a bulletin issued by Mead Sales Company and expresses the matter of relative humidity about as simply as possible.

As we have previously mentioned, paper made in January might not work too well in April, and paper made in August might cause trouble in a warm dry pressroom in November. This is simply another example of relative humidity at work. In other words the

relative humidity of paper as it leaves the paper machine during the cold clear days of January is in balance with 25 per cent to 30 per cent relative humidity. Paper made under the moist, humid conditions in August is in balance at from 35 per cent to 40 per cent relative humidity. However, a higher relative humidity is usually maintained in offset paper to allow for some drying out in the finishing processes. If too much relative humidity is left in the sheet before the paper goes through the calender stack, extreme care must be exercised to prevent damage to the paper known as "blackening."

Relative humidity and moisture content are such important factors in running offset papers, that a whole article could well be devoted to these subjects. There are several bulletins devoted to these subjects available through the Lithographic Technical Foundation. Then there is another little trouble maker known as static electricity that sometimes causes a few worries in the offset plant. Of course we all have tried rubbing a fountain pen on our coat sleeve on a cold dry day and then make that fountain pen pick up small scraps of paper. That is static electricity in its simplest form. The static electricity was not in the paper, it simply reacted to it. Static electricity is generated by friction, one sheet of paper rubbing against another as it leaves

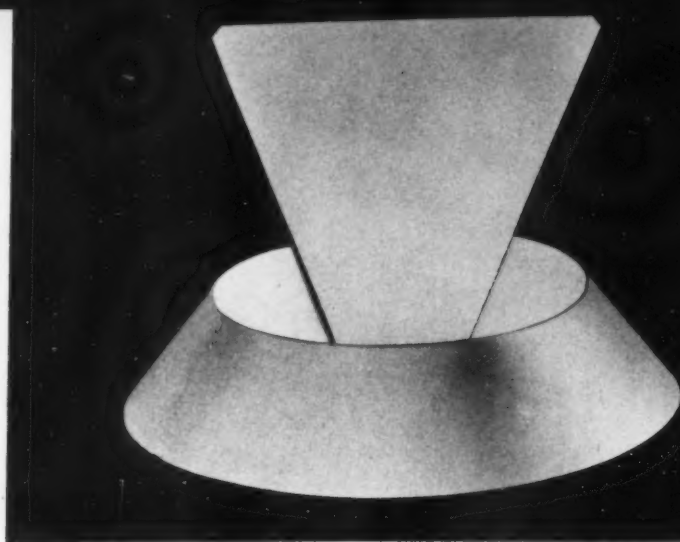
the feed table on a press. Or it is generated by slipping belts or moving parts of machinery. This static charges the paper and the only way to get rid of it is to ground the charge.

It has been found that when paper contains $3\frac{1}{2}$ per cent moisture or less it is not a conductor. Air with a relative humidity of 35 per cent or less is not a conductor. Therefore when these conditions exist it is necessary to introduce a conductor that will discharge the electricity by grounding it. On the other hand when paper contains 4 per cent or more moisture and the relative humidity of the air is above 40 per cent there is much less danger of static electricity developing as both the paper and the air automatically act as conductors and the static is discharged.

Many mills have installed static eliminators on their paper machines as one more precaution in making papers that will work for offset. If the offset process were a dry process instead of a wet process many factors would be eliminated in the making of the paper and the moisture content, but because the paper comes in contact with dampened rolls in addition to the changing relative humidity of the pressroom there is still a lot of work to be done in perfecting the transition of pulp and other raw materials into a perfect sheet of offset paper.



One of many variations of display designed with radial letters. If the merchandise lends itself well to the idea, dummy packages can be substituted for the letters.



A circumflexed basket display. It is all of one piece permitting ample space for copy, slanted toward the eye. This construction also provides a good strong base.

new forms in

DISPLAY DESIGN

by Richard Eaton Paige*

THE display lithographer today faces a problem common in nearly every industry. And that is competition from people not in his own line. For in addition to rivalry among display lithographers themselves, outside competition is becoming a major factor. Unpleasant as the truth sometimes is, it must be faced: the cardboard display is being replaced in many excellent markets by half a dozen non-lithographic materials. The display lithographer has seen appropriations for point-of-sale material rise to unprecedented heights in the last decade, but he was not alone in watching that rise. Others were watching too.

When the advent of the floor merchandiser created a new and successful method of selling, lithographers did a

brisk and profitable business. Before long, however, corrugated houses, usually larger institutions (such as, for example, Robert Gair, Hinde-Dauche), developed their product to meet the demand. Through such development they captured a high percentage of this large volume business, enough to establish them in the display field. Also, an alarming number of cosmetic and perfume counter pieces, once deluxe constructions lithographed in many colors, became products of glass, metal, wood or plastic. Even in groceries,

where cardboard seemed the unbeatable medium there came into use an increasing number of wire racks, metal stands, or worse, the self service market with neither counters nor windows for any display material.

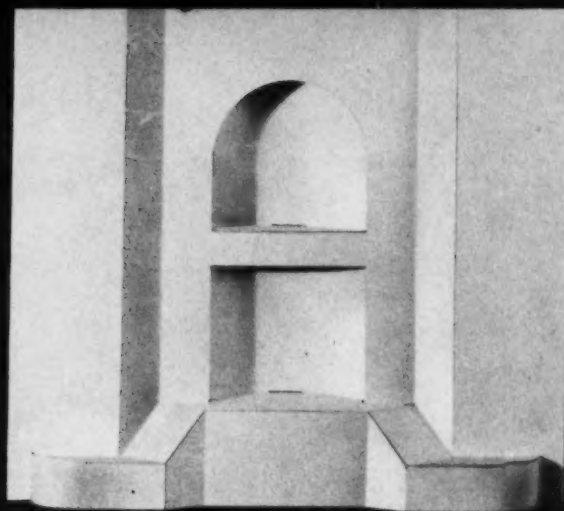
As if this was not bad enough, intra-trade competition has grown. Small runs have found their way to silk screen, photo gelatin or photographs, while producers of lithographed material on the light caliper stocks have been underbid by folding box houses making their own board. Folding

To meet the growing competition from non-lithographic media in the display field, the lithographer is urged to adopt new structural designs in displays.

*Director of Development and Research, Display Finishing Co., New York.



A simple, but striking display for shoes, rubbers, etc. Note the pleasing, and at the same time finished, effect of steps.



A platform display of interesting angles which can be shipped in a very small package. It opens automatically and can be set up quickly.

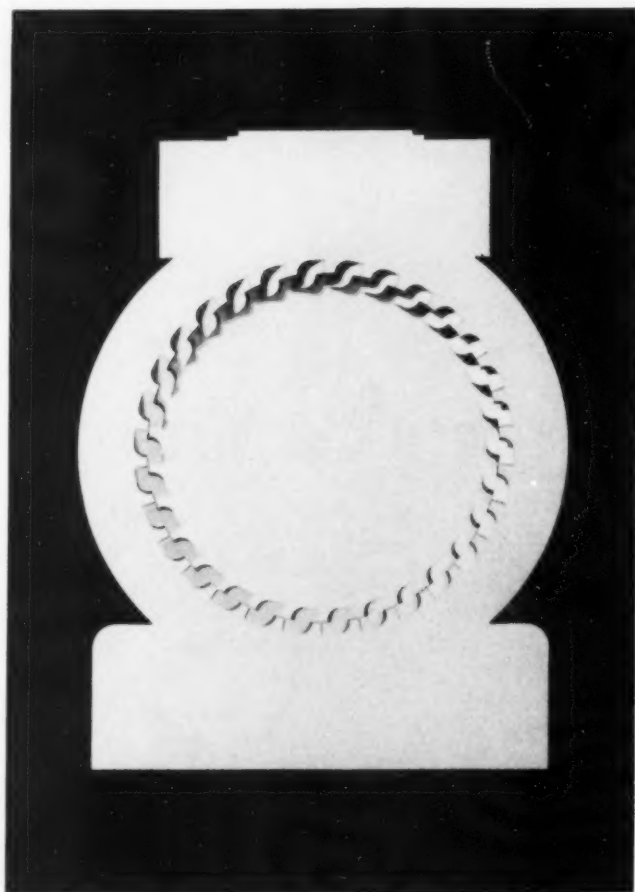
boxes, too, are being designed with attractive display features. Beside making heavy inroads on point-of-sale appropriations, the growth of the outsiders has established them permanent-

ly in the field, and as strong contenders for both the display lithographer's old business as well as the new.

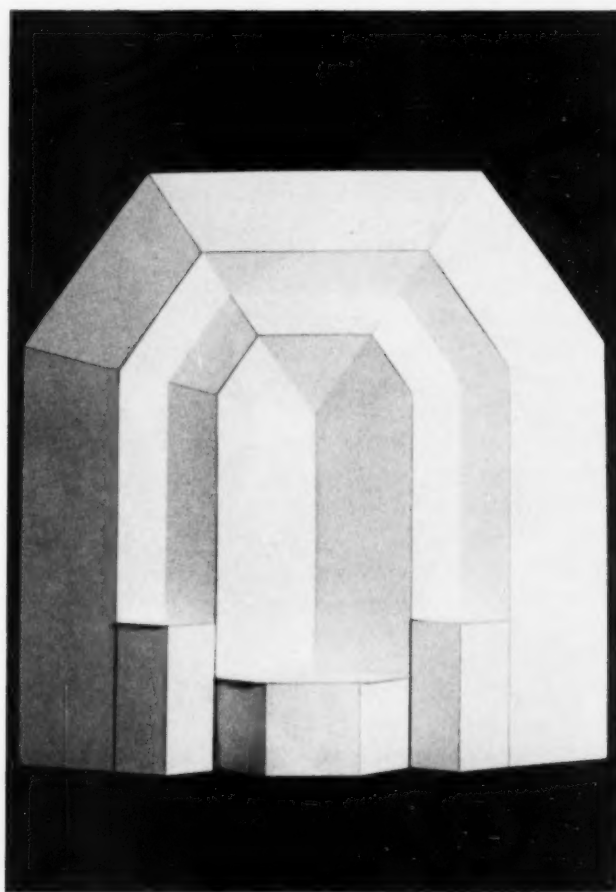
In order to help the display lithographer protect his business from the

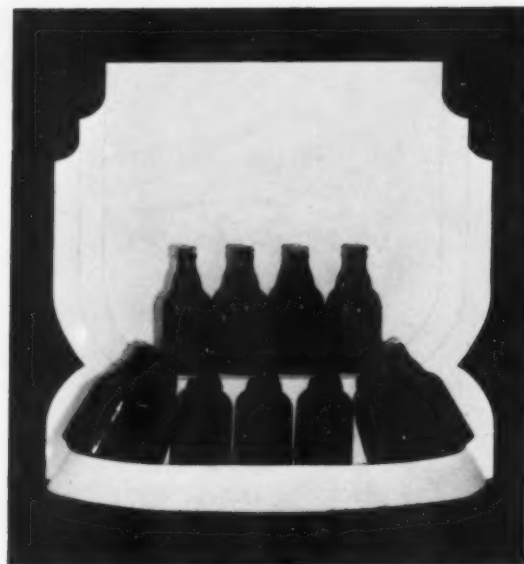
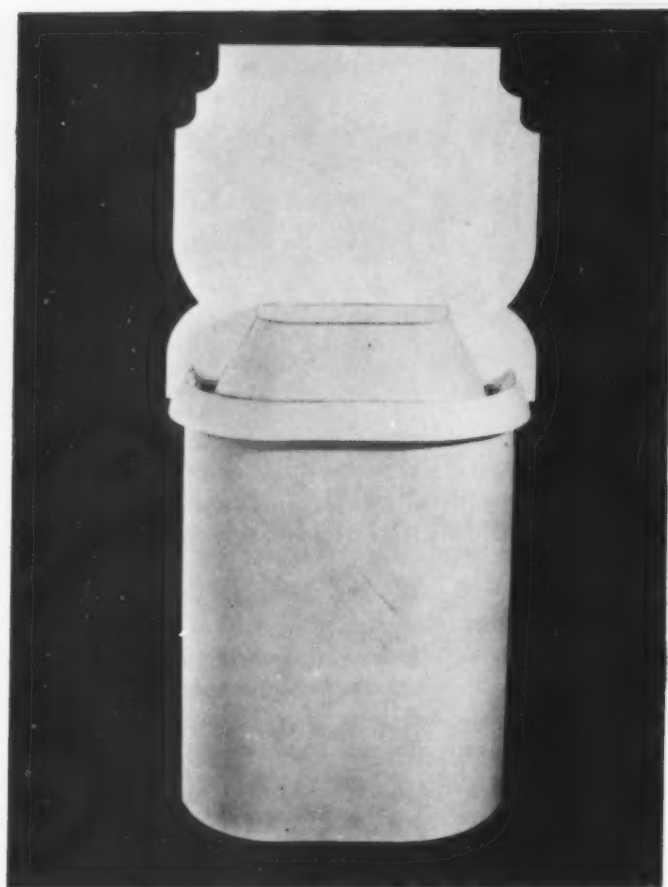
eventual narrowing of his markets, and to help him find new uses for his product, there was formed a few years back a research organization to make a scientific study of the construction of

Radial frame display, providing a good inexpensive frame for an illustration, which can be shipped flat.



A circumflexed window display designed for perfume or cosmetics. The background is of one piece, requiring no easels or paste-ups.





Combined floor stand and window display or counter display, left. Above, the top part of the display has been converted into a counter display. A platform such as the one shown is so constructed as to be capable of bearing great weight, yet the stock used is very light.

the cardboard display. Its dual aims were to free the display field from the limited number of forms it was possible to make with cardboard, and to create a new field of engineering, cardboard engineering, in which graduate engineers, trained in practical manufacturing, would bring cardboard construction to an exact science. Accompanying this article are a number of photographs of new forms and designs in display which have grown out of this research. The moulder and finisher who backed these experiments knew that the only way cardboard could continue to dominate the display field would be to give a greater dollar's worth than any other media.

Research is slow moving. Even the most outstanding discoveries take years before the patent situation is settled and the trade learns to accept the advancement. In the case of this research, a new theory had to be conceived before progress in display construction could be made. That theory was that folding itself was not basic. The entire industry had been confined to the scoring and folding of straight

lines since its beginning. This was due to the fact that regular geometry was used in the planning of display construction. The application of a whole new geometrical system in the construction of the display which should open up a new era in display design and construction was the basis of the new theory. The construction of the displays in the photographs accompanying this article are the first products of that theory.

This system has already made possible platform displays, entirely without under-support, capable of bearing hundreds of pounds of weight, yet formed from cardboard so thin (.040 points) that in sheets it is unable even to hold itself erect. Other developments are step or platform displays without the ugly holes under each step such as are found in constructions which have been just folded. Then radial scoring has been used in such a way so as to raise one or more planes from a flat bank without affecting the length or width, as well as many other attractive and useful displays to increase the purposes to which litho-

graphed cardboard may now be employed.

Since the early nineteen thirties, there has been a growing realization that nothing sells merchandise like the display of merchandise itself. The result of this has been the evolution of flat cards with pretty girl heads into platform displays for windows, floor merchandisers for inside use, jumble baskets for counters, and a 90 per cent elimination of flat pictorial displays from counter use.

THE increasing importance of display construction during this age of impulse buying should find the lithographer with more ingenious merchandisers than any other display manufacturer, for the medium with which he works, lithography, is becoming so versatile and economical that the continued domination of the field should be assured. However, new and more economical methods are necessary in the construction and design of the display, as well as in its lithographing, and should be made use of if non-lithographic competition is to be met.

Offset Press Operation

The first in a series on offset pressroom problems by Mr. Latham whose lectures on the many phases and varied aspects of offset press operation, delivered at the Lithographic Technical Foundation in New York during the past winter, proved to be one of the most interesting and popular courses that institution has yet offered. Mr. Latham is at present giving his lectures before the Litho Club of Philadelphia, also under the auspices of the Foundation. While the very nature of the subject makes it likely that Mr. Latham will, in this month-to-month series, occasionally touch on material covered in his lectures, they are not, however, to be confused as the same. The articles have not been adapted from the lectures.

BY C. W. LATHAM

A TRUE press cylinder is one whose surface is truly cylindrical throughout its length and periphery, free from flats, depressed areas and any eccentricity however slight. Such a cylinder is a difficult thing to make and a more difficult thing to maintain throughout years of use.

Just looking at a cylinder will give no indication of its imperfections. It does not have to have a sharp dent in it, or a hole or be cracked to be troublesome. It need only have a depressed area of three or four thousandths deep to make a decided change in its performance and these depressed areas may be caused by any one of a multitude of happenings. Too much pressure alone may cause a change in shape of a cylinder, or the rusting of the surface will cause depressions. A rag, a sponge, a chip of wood, nail or other foreign matter allowed to pass between the cylinders will cause unsuspected damage. Even a curled-up sheet of stock will often leave its mark, so it is never wise to take it for granted that cylinders are perfect just because no imperfection can be seen.

The reason that these cylinder imperfections are so serious is that they necessitate the use of excess pressure

in order to get a print over the entire surface of the sheet, and no matter how cleverly these areas are built up with paper patches when they are discovered, excess pressure is still necessary to take care of the imperfections of the patch.

Excess pressure in turn changes the surface speed of the cylinder at the point of contact, upsetting the perfect synchronization between the cylinders that is so necessary to the offset process. The way excess pressure changes the surface speed of the blanket at the point of contact is through that elusive element known as blanket creep. It should be obvious that when the blanket is compressed between two cylindrical surfaces and made to travel at the same R.P.M. as one of the cylinders by being fastened to it, there will be an acceleration or creep at the point of compression.

The small amount of creep that is generated by a normal squeeze pressure of four thousandths can be compensated for by slightly overpacking the plate and underpacking the blanket, but when this squeeze pressure is even a few points in excess of normal, it cannot be compensated for and synchronization is lost.

The bad effects of lost synchroni-

zation are many and far-reaching. A frictional rub or scrubbing action is set up between plate and blanket surfaces that causes a grinding away of the water receptive coating on the plate. This coating is a soft gelatinous substance that carries the dampening solution and protects the plate from taking ink in the open spaces and makes planographic printing possible.

When the water receptive coating has been worn and damaged by the rub of the blanket, there is a tendency for the plate to scum, and the pressman's reaction is to increase the water supply. This results in surface water, that is, water that is free of coating and grain and this water generally winds up in the inking rollers, causing an emulsification and caking of the ink. When this happens, the ink loses its water fighting quality and the printing dots on the plate no longer have the ability to resist the dampening solution and deliver a healthy charge of ink to the paper, and the printing becomes dull or even water-blind.

If the press continues to operate under this condition, this rub will attack the second stronghold of the water, namely the grain. Due to its formation, the grain helps to hold dampening solution through capillary attraction and when the grain formation is rubbed down and flattened to such an extent that it will no longer hold water, the plate is ruined. This rub, which is the result of excess pressure, which in turn is usually brought about through imperfections in cylinders, will manifest itself in the form of scum or tinting and this scum may take the form of streaks due to the rubbing being jerky or vibratory. This rub will often cause the halftones to print full due to smearing dots, and if the pressman increases the acid strength of the fountain solution to overcome this type of fullness, the probability is that he will soon have a plate that is both sharp and scumming at the same time.

And so it is that many ills of offset lithography can often be traced back to imperfect cylinders. Among these, the more common are: scum-

(Turn to page 59)

"Gentlemen," by David
Fletcher, Underwood &
Underwood, New York

SEVENTH
INTERNATIONAL SALON
OF PHOTOGRAPHY

1940

Honor prints from the Pictorial Photographers of America's annual exhibition held at the American Museum of Natural History, New York, last month. These prints were honored for their ability to tell a story at a glance and tell it in a masterful way, whether in a book, magazine, newspaper, or on a poster.



"Whirligig," by Lewis T.
Grayner, Washington, D. C.



"Grace," by William
Rittase, Philadelphia



"Nightmare," by John Muller,
Muller-King Studios, New York



A thoroughgoing analysis of all
the controllable factors involved,
from original copy to finished job

(Part II)

Variables in COLOR REPRODUCTION

By Herbert P. Paschel

(This is the second of two articles by Mr. Paschel on Variables in Color Reproduction. The first appeared last month).

SO FAR we have criticized and analyzed the deficiencies of three-color reproduction. The reader undoubtedly anticipates that the remainder of this article will deal with concrete advice on how to overcome the aforementioned difficulties. Unfortunately writers can do no more than state the requirements, outline the pitfalls and limitations and give approximate directions based upon previous experience. The circumstances associated with color work are so variable that each job will demand individual judgment and varying treatment.

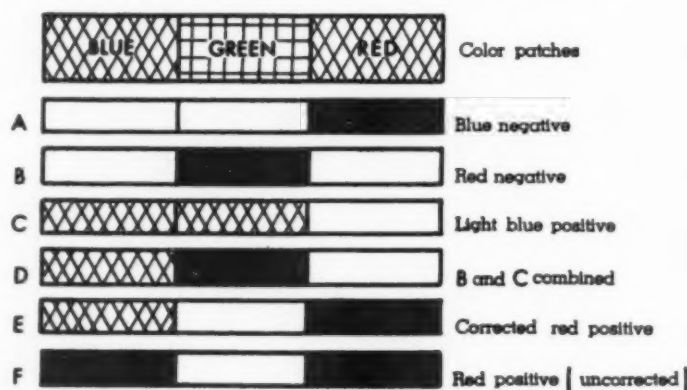
Many workers in the field are striving to perfect methods to eliminate retouching but, even in the face of the numerous improvements made, the writer contends that handwork will always be with us. It may be minimized by certain forms of control but definitely never eliminated.

Standardization of materials and technique and a close cooperation of all departments will certainly help to reduce the amount of handwork necessary. The retoucher however is an absolute necessity to overcome the

inherent and uncontrollable factors of color reproduction.

When the deficiencies of any phase of the process are too variable, it is best to make the tonal corrections by hand. Continuous tone posi-

Fig. 3 Schematic representations of the effect of masking. The shaded areas in cases C, D & E indicate intermediate densities, or those which fall somewhere between highlight and shadow densities.



tives and negatives may be retouched by the use of pencil, crayon, negative stains, abrasives, opaques, etc. Halftone corrections on negatives and positives can be effectively made by a systematic reduction of the dot size by chemical action (dot-etching).

A consideration of great importance to the correctness and efficiency of retouching is the matter of proving. The results obtained by hand proving will be quite dissimilar from the impressions obtained from the press. There will also be a slight difference between a machine proving and the results from the actual run. Due allowance for this difference must be made in the corrections. By no means should the prover attempt to enhance the quality of the proofs by selective inking, etc., since the proofs will be misleading to the retoucher and the final impression will soon show the folly of such procedure.

When we are confronted with deficiencies which are invariable, these can be compensated for in a somewhat automatic manner. In the case of printing inks, for example, photographic manipulations have been introduced and are known as masking. Masking, as the name implies, is simply to withhold printing densities in proportion to the deficiency of the printing ink and the amount of correction desired. The most widely used masking process (Modern Masking Method—Eastman Kodak Company) consists of registering a light positive from the blue printing negative (Continuous tone) over the red printing negative when making the continuous or halftone positive. The blue-green ink is the most deficient and, since a layer of magenta ink (lacking in blue) under the blue ink would degrade rather than enhance the blue, it is desirable to remove from the red image a certain amount of density wherever blue is present. This the masking method does and it is graphically illustrated in Figure 3. The densities recorded in the blue and red negatives are represented by sections A and B. A light positive (C) made from the blue negative (A) is shown in section D combined with the red negative (C). By comparing the densities of the corrected

red positive (D) with those of the uncorrected red positive (E), the value of this system can be easily determined. To maintain a contrast balance within the set of separations, the light blue positive is masked in turn with each of the separation negatives.

The effectiveness of the primary masking method depends on the correctness of the separation negatives. With an incorrectly balanced set of separation negatives, the inaccuracies of the separations are necessarily carried over to the masking positives and perfect correction can not be obtained. Even with extreme accuracy in the exposure and processing of the separations, the color values may be distorted by some color deficiency of the copy which will also influence the degree of correction obtainable. Separation negatives (continuous tone) may be out of balance because of errors in exposure or development or both. Many cases of incorrect separation negatives may also be traced to a light source that is out of balance. How the color value of the light source may influence the balance of the four-color negatives may be explained as follows: When using a color filter, it is necessary to expose longer to compensate for the light lost by filter absorption. The number of times the exposure must be increased when using a filter is known as the filter factor. The factor depends upon the total transmission of the filter, the color sensitivity of the plate or film and the color value of the light source employed. Filter factors are usually supplied by the manufacturers but they are based on light sources of a specific color value.

It is not correct to assume that your arclights are operating at the color temperature recognized by the manufacturer as the color value of arcs. Arclights may vary in color value with fluctuations in current, length of the carbons, etc. Other forms of illumination such as, tungsten, photoflood and fluorescent tubes also vary with changes in current, age, etc. If your separation negatives are out of balance and you are convinced that exposure and development have been correct, look to your lights as a possible source of trouble. The

color temperature meters which recently appeared on the market are handy devices for quick and accurate determination of the color output.

THE alterations necessary because of faulty originals, incorrect ink values and the like, are considerations which are not a part of the separation process. To circumvent the possibility of adding to the retouching already necessary, the densities recorded by the separation negatives should be facsimile or straight line reproduction. The exposure and development of separation negatives must be correct as well as uniform. Exposure controls the density while development controls the contrast. When these two factors are in the proper ratio for each negative in a color set, balanced separation negatives are the result. When the treatment accorded each of the negatives is radically different, an extremely unbalanced set which will need a lot of retouching will be the result.

If a yellow negative, for instance, is underexposed and given extreme overdevelopment in an attempt to compensate, the heavier colors will contain too much yellow whereas delicate tones as well as light yellow will lack yellow. Conversely, overexposure and under-development of the yellow negative will result in too much yellow in the highlights and lighter tints while the heavier yellow areas will definitely lack full tone. Thus we see how the extreme ends of the scale are affected with a resulting distortion of the color balance. When negatives are developed individually, it is desirable to use fresh developer for each plate. The action of a developer in which a plate has been processed is uncertain because of by-products created by oxidation and certain chemicals introduced into the solution by the immersion of that plate. It should be remembered that, when continuous tone negatives are made with the intention of masking them, they should be contrastier so as to overcome the flattening-out effect of the masks.

The influence of the light source, filter factors, exposure development and uniformity of the separation

(Turn to page 61)



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CALLING ALL LITHOGRAPHERS!
to
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"The Riviera of America"
JUNE 4-7, 1940

SPECIAL RATES FOR LITHOGRAPHERS' CONVENTION

West Coast Lithographers Getting Ready for Visitors

Advance info from Del Monte and environs indicate that delegates to the 35th LNA meeting, June 4-7, will sample Western Hospitality in a big way

DELEGATES and visitors to the 35th Annual Convention of Lithographers' National Association, to be held June 4-5-6-7, at Del Monte, California, will have an opportunity to sample Western Hospitality in a big way, to judge from the outline of tentative plans for entertainment. Carl R. Schmidt, vice president of Schmidt Lithographing Co., San Francisco, who is co-chairman with George W. Hall, president of Western Lithographing Co., Los Angeles, of the committee on arrangements, and who never likes to talk about anything until it is an accomplished fact, was reluctant to let us in on the plans this early in the day but we did learn enough to be able

to report some pretty exciting prospects, ranging all the way from yacht-trips and cruises, to educational features for the serious-minded. Indoors and out, it looks as though every hour of the delegates' time at Del Monte, in San Francisco, and on Treasure Island, will be filled with a wide choice of entertainment. Los Angeles will get the visitors first. We have not yet learned all that is afoot down there, but we are given to understand that in the well-known manner of Southern California, they will attempt to outdo the north.

The big feature of the Del Monte entertainment program centers around golf. Tournament events for both men and women are being carefully

Watch Association Bulletins; Don't Miss Convention Announcements



LOUIS TRAUNG, president of Stecher-Traung, General Chairman

planned by golf wizards H. T. (Mike) Gardner, Stecher-Traung Lithograph Co., San Francisco, who is Western lithography's pet champion and player of a mighty sweet game they say, and Ralph J. Wrenn, also of Stecher-Traung, another of the scientific hitters. These two, co-chairmen of the Golf Committee, are putting their heads together to work out plain and fancy tournaments with a lot of fine cups and trophies. Mrs. Carl R. Schmidt, who is in charge of the entertainment for the ladies, will work with the Golf Committee on plans for the women's tournaments. Del Monte boasts four golf courses, all of them beautiful enough to take

LEO BLANK, Stecher-Traung sales manager, Chairman of Transportation



even a golfer's mind off the hole, so every visitor who can knock the white ball around is urged and reminded to bring his clubs.

For those who don't golf, or for the golfers who want to relax, the famous Seventeen Mile Drive and other beautiful scenic trips around Monterey Peninsula are being scheduled; and the more athletic can join the horseback riding or the swimming parties or the boating groups.

There is no doubt about the Annual Dinner being a spectacular affair. Frederick E. Keast, advertising manager, Crocker-Union, San Francisco, is in charge of this event. He is being very secretive about some extra-special entertainment features he has up his sleeve and it looks as though he were going to make it a surprise evening, but we know there will be dancing and that this event will be open to delegates, their wives, and guests of the Convention. California lithographers will be the hosts at this affair, which is expected to draw a full attendance. Arrangements Co-Chairman Carl R. Schmidt has sent invitations to all lithog-

The LNA has arranged for a specially conducted, low-rate, all expenses-paid round trip tour to Del Monte for those in the East and Middle West. The special train will leave Chicago on Tuesday night, May 28, stopping for half a day in New Mexico to motor through the Pueblo district, spending a day at the Grand Canyon in Arizona, two days in Los Angeles, including a steamer trip to Catalina Island, arriving at Del Monte Monday afternoon, June 3.

Following the convention, the special train will depart for San Francisco on the first leg of the homeward journey. Then to Portland, to Seattle, to Victoria and to Vancouver. Following a day at Vancouver, the train will leave for Banff and a day at Lake Louise. From Lake Louise, the tour will return to Chicago through Canada and the Northern States arriving in Chicago on June 15. The entire tour, including the time spent at Del Monte, will take just under three weeks. Hotel reservations at Del Monte should be made directly with the Hotel Del Monte. Further particulars regarding the tour may be obtained from W. Floyd Maxwell, LNA executive secretary, 295 Madison Ave., New York.



RALPH J. WRENN, Stecher-Traung, co-chairman of the Golf Committee

raphers of the Pacific Coast, including British Columbia, also to executives of the can manufacturing companies, to paper, ink, machinery and supply people, who will be guests of the convention.

Saturday, June 8, the scene shifts to San Francisco. For those who wish to go to San Francisco, full entertainment will be planned, including trips to points of interest, visits to local plants, visits to the exposition on Treasure Island, etc. No formal program has, however, been worked out. The formal itinerary sends visitors on up North to Portland on the 9th, but any who decides to linger longer in San Francisco will find that their hosts have a number

H. T. GARDNER, Stecher-Traung, co-chairman of the Golf Committee



of special trips and events in reserve.

It is sixteen years since a national convention of lithographers was held on the West Coast. In 1924, the LNA met at Del Monte and no national convention of the industry has met on the Pacific Coast since that time. This fact makes the Western lithographers all the more eager to show what good hosts they can be and they are sparing no pains to make this gathering both successful and enjoyable. The Graphic Arts Institute in San Francisco is co-operating with the local members of the LNA towards this end.

A QUICK glance over the list of committeemen who have been entrusted with the many phases of the entertainment and arrangements reveals that each man has the job best suited to his talents—and it's a pretty talented company.

Louis Traung, president of Stecher-Traung Litho Corp., San Francisco, is General Chairman. This appointment is particularly appropriate, since the LNA planned to honor at the Convention Charles and Louis Traung, who have done so much for the organization of which they were charter members. It was these two who helped reorganize the body out of which the present LNA eventually developed. This thirty-fifth meeting was planned to be dedicated to the 74th birthdays of the Traung twins. It will cast a shadow over the event that Charles should have passed away four months before the meeting he was so eagerly awaiting and in connection with which he had done important preliminary work.

Carl R. Schmidt, Schmidt Litho, San Francisco, as co-chairman of arrangements, has, together with George W. Hall, Western Litho, Los Angeles, got a tough job well started, as the preceding outline indicates. He is a director of the LNA, and vice-president and general manager of the Schmidt company. He is enthusiastically looking forward to the golf tournaments at Del Monte.

As chairman of the Finance Committee, Louis Sloss, vice-president of Crocker-Union, San Francisco, has already accomplished the major portion

of his job, as our investigators reported confidentially that a substantial fund for entertaining delegates and visitors has already been raised.

Everyone who knows H. T. (Mike) Gardner and Ralph J. Wrenn, both executives of Stecher-Traung Lithograph Company, agree that no better team could have been named for co-chairmanship of the Golf Committee.

Frederick E. Keast, also of Crocker-Union, is taking his chairmanship of Entertainment & Annual Dinner Committee in stride and all indications are that he is going to require some extraordinary votes of thanks. As chairman of transportation, Leo Blank, sales manager for Stecher-Traung, also received a job befitting his talents. Richard Schmidt, president, Schmidt Lithographing Co., San Francisco is program chairman, and that's a committee that is keeping its plans very quiet for the present. As reported previously, Mrs. Carl R. Schmidt, is in charge of Entertainment for Women. Ralph J. Wrenn, Stecher-Traung, will head the Attendance Committee. G. L. Beedle, secretary of the Graphic Arts Institute, San Francisco, is chairman of publicity. Each committee chairman is appointing assistants and co-workers at his or her discretion.

Behind the Scenes Story

Marshall-White Press, offset and letterpress printers, Chicago, has issued a promotional booklet entitled "Behind the Scenes", a word and picture description of the services it offers to the buyer of printing. Since the company's business is handled mostly by mail and 95 per cent of its customers have never seen any of its facilities or met any of the people with whom they have dealt, it was felt that a booklet such as this would not only strike a responsive note, but also be a goodwill builder. It has been mailed to an extensive mailing list throughout the country and also distributed by salesmen in soliciting new accounts. Some of the pages were produced by offset lithography and others by letterpress with each process clearly indicated on the various pages. The book shows clearly

how the different paper surfaces reproduce cuts, type matter and litho plates. An interesting situation grew out of the listing in the latter part of the book of nationally-known advertisers which Marshall-White Press has served. Naturally, the firm, in the space provided, listed all of its bigger accounts first. However, soon after the book came off the press, a number of customers wrote in declaring that their name had been omitted. This was felt to be an interesting commentary on the commendable quality of the promotional piece.

The Chequer, New House Organ

Volume 1, No. 1 of *The Chequer*, new bulletin of the Institute of Bank Stationers, New York, made its initial bow last month. Edited by I. W. McLean, the executive secretary of the Institute of Bank Stationers, *The Chequer* will be published "semi-occasionally" according to the masthead, to give the Association latest legislative as well as general news affecting its members. The lead article in the first issue declares "We are issuing this paper because we find that from time to time suggestions and ideas of a general nature come to the Institute office which we feel are of importance to our members but which cannot, for reasons of economy, be made the subject of bulletins." The editor invites your suggestions and criticisms and also any items of general business interest which you would like to share with your fellow members. Among the additional subjects discussed are new income tax regulations, business insurance, wages and hours law, proposed amendments to the N.L.R.A., and protecting lithographers' ideas.

Form Buyers' Service Bureau

Chicago Federated Advertising Clubs have organized a Bureau of Buyer Information to answer attacks on advertising by consumer groups. A program to educate the consumer on the functions of advertising is being developed. Material will include booklets, lectures to consumer groups, radio programs and publicity through the press.

Eastman announces
KODAGRAPH
CONTRAST PROCESS THIN BASE FILM
a new, faster film for tungsten illumination

KODAGRAPH is a new trade name, supplementing the firmly established *Kodalith*. Both identify high-quality Eastman products specially designed to meet the exacting requirements of the Graphic Arts.

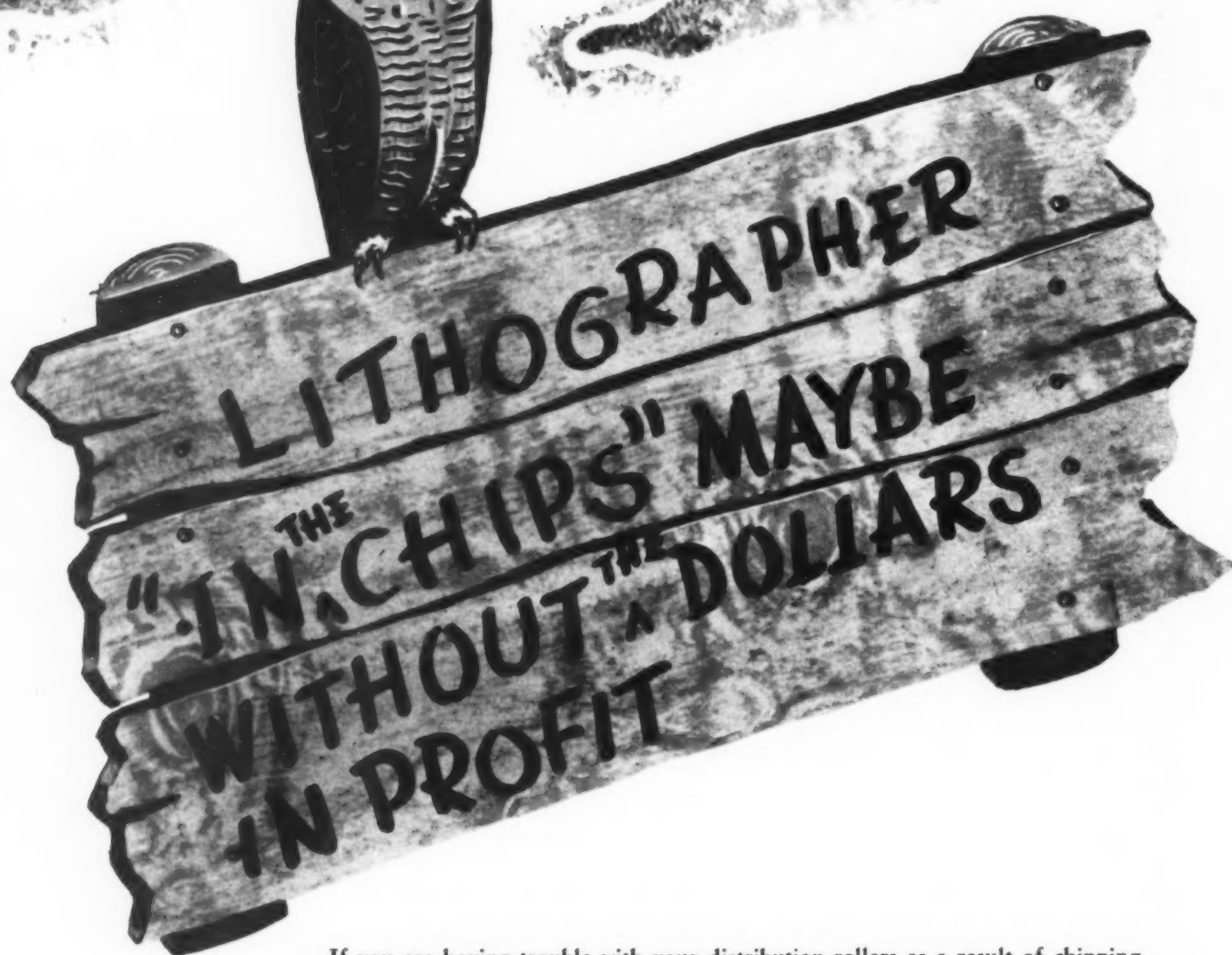
Kodagraph Contrast Process Thin Base Film is a new, faster film for use with tungsten, Photoflood, or mercury-vapor illumination. Orthochromatic and having an antihalation backing, Kodagraph Film is recommended for both line and halftone work. Because of the thin base, lateral reversal of the image on metal is easily obtained by printing with the emulsion side toward the exposing light. The new film also is adapted readily to the making of combinations. Because of Kodagraph's high degree of uniformity and typical Eastman dependability, exposure and processing procedure can be quickly standardized.

Kodagraph Contrast Process Thin Base Film is supplied in the same sizes of sheets and rolls, and sells at the same prices, as Kodalith Thin Base Film. Place an initial order now with your Graphic Arts dealer.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

Graphic Arts Department

All Is Not Confucius—
The Wise Old
Owl Says:



If you are having trouble with your distribution rollers as a result of chipping, do what most profit-minded lithographers are doing: Have them recovered with ROBERTS AND PORTER LEATHER DISTRIBUTION ROLLERS and put an end to profitless operation and costly maintenance. ROBERTS AND PORTER LEATHER ROLLERS mean greater profits in the pressroom and lower upkeep. Send us your rollers *today!*

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NEW YORK

Phone: CANal 6-1646

Having Drying Troubles?

Then read this brief but helpful examination into some of the more common causes and how they may be avoided.

By George Cramer*

THERE are many answers to the question of how much drier the lithographer should use and all are different. The amount of drier the lithographer should use depends on the ink for one thing. Suppose, therefore, we classify the various lithographic inks as to their drying or non-drying properties.

Many pigments used in lithographic inks are so-called natural driers. They are, in many cases, those developed around metallics such as lead, iron, zinc, copper, etc., which act in a capacity similar to the ordinary drier. Such lithographic inks, therefore, require little or no drier, or at least, if a drier is used it must be added carefully. A second class of pigments used in lithographic inks may be described as neutral as regards drying effects. Many of the organic pigments fall into this classification. Their reaction with the binding vehicle is such that only a nominal amount of drier is necessary. A third class of lithographic ink pigments includes a number which definitely retard the drying of their vehicles, and therefore require an additional quantity of drier for satisfactory results. These retarding pigments are composed of ingredients that act very much the same as anti-oxidants, and include such colors as black, blue, purple and green.

Stocks used on the lithographic press present surfaces which, of course, are factors in causing varying results in the drying of litho inks. It is natural to assume that the more absorbent the stock, the faster an ink will dry under

normal conditions, and that the opposite is true of a non-absorbent stock. Many stocks fall into these two general groups, and still many others are in an in-between class. Then the moisture content of a stock has a definite effect on the drying rate of a lithographic ink. Ideal conditions for ink drying call for a stock of a low moisture content. What is ideal for the ink, however, may not always be ideal for the stock, or even possible. However, production experience indicates that a relationship of moisture, drying, shrinkage and handling can be definitely established and from this relationship a drier prescribed. Coatings, binders and even hardeners used in paper making undoubtedly affect the drying of lithographic inks. Special coatings such as lacquered stocks, parchmentized or even high rag content stocks tend to give difficulty with the ink drying. No definite recommendations can be made for the percentage to be added, thus only previous experience can dictate to the lithographer just what type or what proportion of drier is necessary.

How much is the drying of a lithographic ink affected by the amount of moisture picked up during the production run? An analysis of the moisture content of samples of ink removed from a lithographic press during an actual run indicates a variation from ten to thirty per cent accumulated, depending on the size of the run. It is generally agreed that water in ink will retard its drying considerably. The

variations of moisture in ink—which are accumulated from the dampening system—are most likely due to faulty water adjustment, very little work on the plate, shallow grained plates, or faulty ink manipulation. Each of these factors contributes to drying difficulty and the lithographer should make every effort to avoid or minimize them wherever possible.

When does the lithographer have the most trouble with drying? There is no doubt but that summer presents the greatest difficulty. The final and irrevocable solution to the problem, of course, is air conditioning. The big bugaboo is the moisture content of the air. If one studies the absolute humidity in a lithographic shop during the four seasons of the year, a really true picture of varying moisture conditions and their relationship to drying of lithographic inks will manifest itself. The number of grains of moisture in the air in the winter, for example, will often be found to be less than one, whereas in summer the amount of moisture in the air will run as high as fifteen grains or even higher. Moisture laden summer air, plus dampness accumulated in paper stocks, both from the lithographic process itself and from the surrounding atmosphere, play havoc with drying.

Although air conditioning seems to be the only sure solution, the lithographer can help himself by observing a few precautionary measures to be listed later. Too much emphasis can-

(Turn to page 59)

*Sinclair & Valentine Co., New York.

SATURDAY
MARCH 23, 1940

NEWSGLANCE

IRISH PRISONERS REBEL, START FIRE

IN HARTFORD

Hartford's Catholics get a new auxiliary bishop, the Rev. Henry O'Brien. He also becomes full bishop of Sita, a city in Asia Minor which he probably will never be able to see. (Religion—Page 13)

Hartford's Protestants will have to brave below-freezing weather to attend the Easter Sunrise Services in Goodwin Park. Dean Malcolm Pitt is going to speak. (Religion—Page 13)

Last-minute shoppers make this Easter seem one of the busiest in the last few years, at least for the less expensive shops. But the season's come too early for any real trade. (Consumer—Page 15)

Hartford's Katharine Hepburn, most often seen in slacks and an old shirt, is named one of 13 best-dressed women in the US. Awards are made in every field of feminine activity. (Consumer—Page 9)

IN CONNECTICUT

"Thank You, America" is the name of a new book just published by the Rev. George S. Brookes, Rockville Congregational pastor. It's the story of his life here and in England. (Shows & Reviews—Page 13)

IN THE UNITED STATES

The US Army is building a plane which would make Buck Rogers green with envy. It will be nearly twice as large as the famed "flying fortresses," weigh 70 tons and cost \$1,000,000. (National—Page 7)

Best US milers will again tread the same track to-night in the Bankers' Mile at Chicago. A new record will soon be a dream four-minute mile.

**THE EASTER PARADE
AGAIN WILL CHILL**
—HARTFORD

Tomorrow the nation celebrates Easter with new clothes, chocolate bunnies, potted flowers and sermons. And, as usual, New England — Hartford included — will have a chilly, possibly a snowy, Easter Sunday.

The Blizzard which Ed. Reed, Lakeville's weather seer, forecast earlier this week, has come true in some parts of New England. Maine is buried today under 2 inches of snow, upper New York state has eight, and winter still clings determinedly to the valleys and hills of Connecticut. Friday was a motley day for the state, first snowing, the raining, then bright, with a big wind and clear moon last night.

Yesterday and today the local stores were kept busy keeping up with the season. Several florists today called their trade "terrific," pots and lilies and carnations being most popular. Candy stores were fast selling out their Easter baskets, filled with jelly beans, eggs and novelties, and their boxes of chocolates. One store on Main St. said jelly eggs were selling best.

Weather prospects for the eastern seaboard ran Saturday in this vein: "Generally fair to-night and Sunday except light

FDR MAD AT PRESS

The White House denied flatly today that the speech delivered this week in Toronto by United States Minister Cromwell had been submitted in advance to President Roosevelt.

The formal denial was made by White House Secretary Early after a telephone conversation with Cromwell. The diplomat's blast in Toronto against Germany drew a sharp rebuke from Secretary of State Hull. It was later reported that President Roosevelt had seen the speech before it was delivered by Crom-

The statement said in part:
"The public is hereby warned
this time through a formal White
House statement, against believ-
ing certain types of so-called
news stories carried by certain
of so-called newspapers."

20 KILLED

An outbreak of lawlessness in the sugar districts of Vera Cruz State was climaxed today in the slaying of 20 members of a funeral party.

Police reinforcements

were rushed to Dartmoor Prison in bleak Devonshire late today after Irish Republican Army prisoners allegedly staged a revolt and set fire to the building.

Meagre last-minute reports said that the Irish prisoners had overpowered their guards and locked them in a cell. Smoke could be seen coming from the building which is located at Prince Town.

Princes Town.
On the eve of Easter, police were everywhere on guard in England and in Northern Ireland against demonstrations and violence on the anniversary of the famous Easter uprising in 1916.

There was much more violence abroad, but it was of the usual nature. Allied naval officers reported that a new wave of German submarines had been sent out to harass the shipping of belligerents and neutrals, thus substantiating previous reports that the Nazis were building U-boats at high speed.

Things Come Out

Good weather also brought scores of planes out of their hangars. Both French and British.

(Continued on Page 18)

(Continued on Page 16)

NEW BOOKS

The Penrose Annual Review of the Graphic Arts, 1940, published by Lund Humphries, Ltd., 12 Bedford Square, London, Eng. Copies available in U. S. from George Murphy, Inc., 57 E. 9th St., New York. Price, \$5.00.

Despite the war and the fact that because of it there amounts to what might be called a black-out of graphic arts activity, both mental and physical, in Great Britain, the Penrose Annual for 1940, just now available in the U. S., still remains an interesting and inspiring account of progress of printing, lithography, gravure and advertising techniques during the past year. From the editor's, R. B. Fishenden, review of the highlights of developments in design, typography, photographic processes, offset, color and research, to Eric Humphries' account of the Aller Process patented by Claes Aller, of Copenhagen, covering the use of stainless steel as a lithographic printing base, the book is recommended as a "must" for those who wish to keep abreast of what is happening in the fields of advertising and printing.

Especially recommended for the attention of the lithographer are the following chapters: Photographic Type Composition, by V. E. Goodman, covering developments in machinery for photographic type composition; The Aller Process, by Eric Humphries, giving the latest details in connection with the development of the process, wherein a copper image is produced on a stainless steel plate for lithographic printing; Gravure Developments, by J. S. Mertle, being a discussion of the Inta-print, Henderson, Dultgen and Huebner processes; Color Measurement, by H. M. Cartwright, covering the several alternative systems now being employed, with a comparison of their respective merits; Color Synthesis in Trichromatic Printing, by Dr. J. Bekk, dealing with the differences in color phenomena which make true color rendering unattainable without certain corrections; The Eastman Color Temperature, by R. F. W. Selman, a description of the principles and application of measuring the temperature of a light source; The Necessity for Retouching in Monochrome Lithography, by F. J. Tritton; and A Color Chart for Photo-Offset Work, by F. G. S. Cackett.

Size Selection Simplified, Compiled and published by W. J. Blackburn, New York. Price, \$12.75.

Designed as a practical guide to the efficient planning and production of both advertising and commercial printing, this book has been "made to order" for printers and lithographers who want an easy-to-use

reference book that will give them: (1) a wide choice of pre-checked sizes for various kinds of printing jobs; (2) envelope information keyed to those printing sizes; and (3) all other size data needed for planning and producing printing, such as flat-sheet sizes and press specifications. Essential information in the book has been presented clearly and concisely. Charts, tables and text have been arranged and indexed to enable the reader quickly to find the data he needs. The book is lithographed throughout.

Merchandising As a Career. Published by the Institute for Research, Chicago. Price, \$1.00. *c1931*

This book should be of interest to litho salesmen, particularly the cub salesman, in providing him with an informative background regarding the merchant and his problems, and his relation to the advertiser. The basic activities of merchandising are described and the various classes of merchandisers, including the owners of the independents as well as the chains, are outlined. While the book has been written from the viewpoint of the person considering merchandising as a vocation, it contains material which should be helpful to anyone engaged in assisting the merchandiser move goods.

An Outline of Advertising, Its Philosophy, Science, Art and Strategy. Revised Edition. By George Burton Hoitchkiss, professor of Marketing, New York University. Published by the Macmillan Co., New York. Price, \$4.00.

First published in 1933 as a comprehensive survey of the field of marketing activity, with emphasis on fundamental principles and facts, the book has been revised in keeping with the changing character of advertising, which has had to adapt itself to new methods of trade and industry during the past seven years. The author points out, however, that many current ideas and methods are merely passing fads that will soon be as obsolete as the fads of yesterday. The book is divided into four parts—the philosophy, the science, the art and the strategy—not as four departments of advertising, but rather as four points of view from which the complex and interrelated activities of advertising may be studied. Some chapters in the book have required only minor revisions over the original text, while others, such as that on radio advertising, for example, have been completely rewritten. Three new chapters have been added to deal more adequately with packages, trademarks, advertising production and advertising testing. Also many new specimen advertisements have been added

to illustrate recent advances in policies and methods. Such chapter headings as: The Advertiser's Policies and Objectives, Modern Advertising Procedure, Marketing Research, Psychology of Selling, Typography, Color, Layout, Direct Advertising, Merchandising and Dealer Helps, Advances in Outdoor Advertising, The Wheeler-Lea Act, suggests the comprehensiveness of this book.

Handbook of Photography. Edited by Keith Henney and Beverly Dudley, editors of *Photo Technique*. Published by Whittlesey House, McGraw-Hill Book Co., New York. Price, \$7.50.

To augment the many volumes available covering elementary, specialized or purely artistic phases of the subject, this book brings to photo-mechanical workers in one convenient volume a thorough exposition of the serious aspects of the technique of the photographic process and the scientific basis underlying photography and its application. The editors have prepared a comprehensive, authoritative reference work on photography and its technical and scientific applications. Specialists have been selected to write many sections of the book and discussions and data relating to the most technical aspects of photography are made available. The following chapter heads will suggest to the reader some of the subjects covered: Outline of Photography, Optics of Photographic Lenses, Photographic Materials, Photographic Sensitometry, Photographic Light Sources, Light Filters, Developers and Theory of Development, Darkrooms and Darkroom Practices, and Color Photography.

The Photographic Process by J. E. Mack and M. J. Martin. Published by McGraw-Hill Book Co., New York. Price, \$5.00.

The authors are of the opinion that while the literature of photography contains, at one extreme, innumerable elementary instruction books and surveys of a relatively casual nature, and at the other a few special treatises and encyclopedic reference books, there has not been a book on the photographic process presented simply enough for the general student. This book is an attempt to cover that middle ground. It is not intended to be either a handbook of practical methods or an exhaustive reference work, but is designed simply to give the reader an understanding of the photographic process sufficient to make his practice an intelligent application of its principles. The book has been carefully and profusely illustrated and is supplied with a bibliography of a selected list of reference matter which has been found to be useful to both student and practitioner.

Design: the New Grammar of Advertising. By James T. Mangan. Published by The Dartnell Corp., Chicago. Price, \$3.50.

When James T. Mangan, the author, made the statement that "95% of today's (Turn to page 69)

A Sign of

High Quality



HYKLAS Transfer Paper

(LONGLIFE)

Technically Made in U. S. A.

FOR HYKLAS LITHOGRAPHERS

Years of demand for Transfer Paper manufactured in America has been becoming greater and greater and due to the unsettled conditions in Europe we have succeeded in accomplishing the manufacture of this paper.

During the last World War crisis we manufactured a TRANSFER PAPER which was tried, tested and proven to be the exact need for the Lithographic Transferer in America.

The custom of Siebold of always handling nothing but the best, assures you that this HYKLAS American manufactured TRANSFER PAPER will meet the requirements of the most critical and exacting transferer.

**WHY NOT ASK FOR TRIAL SHEETS
AND LET US QUOTE YOU?**

IMMEDIATE DELIVERY IN TWO SIZES:

26 X 33 and 33 X 46

J. H. & G. B. SIEBOLD, Inc.

"Over Half a Century of Service"

Printing **INKS** Lithographing
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MOLLETON · DAMPER COVERS · RUBBER BLANKETS

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HALFTONE
OFFSET**



RESULTS without "number"
... all satisfactory!

Adena Offset and Halftone Offset are made flat, delivered flat and lie flat on the presses. This assures economical production.

Adena is the old-established offset that has done such a good job for printers and lithographers these many years. Always ready to run!

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Chillicothe
A BUY-WORD FOR HIGH-GRADE PAPERS

MODERN LITHOGRAPHY

IN AND ABOUT THE TRADE

Eastern Conference Apr. 26

The third annual Eastern Seaboard Conference of the Graphic Arts will be held at the Hotel Traymore, Atlantic City, N. J., April 26 and 27. The conference is sponsored by local associations of the graphic arts east of the Alleghenies, from the Carolinas through New England. Ivan R. Drechsler, president of the Baltimore Graphic Arts Association, will serve as chairman at one of the sessions.

Arvey Expands

Arvey Corp., Chicago litho finishing concern and producer of outdoor advertising displays, has started construction of a one-story addition to its plant at 3462 North Kimball Ave. The project will cost \$68,000, according to estimates.

Walter Clothier Dies

Walter Clothier, 65, chairman of the board of Ketterlinus Lithographic

Manufacturing Co., Philadelphia, died last month. Mr. Clothier began his business career with Ketterlinus in 1897, two years after his graduation from Swarthmore College and he served as president of the company for fourteen years before his election as chairman of the board in 1933. He was also an official of Franklin Printing Co. During his student days at Swarthmore College, Mr. Clothier distinguished himself as an athlete, serving as captain of both the football and track teams.

Acquires Nivison-Weiskopf

Progress Lithographing Co., Cincinnati, has acquired the lithographing division of the Nivison-Weiskopf Co., Reading, O., it was announced last month. The former company will move from its present plant at 1029 York St., Cincinnati, and will occupy the west side of Main Ave., in the Reading plant. The York Street plant will be sold, according to Charles Klein, president of Progress Litho.

The Reading plant manufactures labels, principally for food and liquor packaging, also cutouts and posters, displays and car-cards.

Progress Lithographing Company is headed by Charles H. Klein, whose father, Benjamin F. Klein, is vice-president of Nivison-Weiskopf. Sidney E. Miller, secretary of Nivison-Weiskopf, has acquired an interest in Progress Litho and will be actively associated with its operations, it is reported.

Schlegel Heads Young Lithos

George Schlegel, Jr., Schlegel Lithographing Co., New York, was elected president of the Young Lithographers Association at the annual election of officers for the year 1940 - 1941, held at the Advertising Club, New York, last month. Other officers named were Alfred Soman, Jr., National Process Co., vice-president; Norman C. Bernhardt, Sweeny Lithograph Co., Belleville, N. J., treasurer; and Sidney P. Voice, Consolidated Litho Corp., Brooklyn, secretary. The fol-

Dinner marking 75th anniversary of the founding of the New York Employing Printers' Association, held at the Hotel Commodore, New York, last month. Feature of the celebration was the selection of the Queen of New York City Printing (inset).



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UNGRAINED GRAINED REGRAINED

We specialize in small plates; including plates for the Multilith.

Service plus Quality—You get this important *combination* when you send your plates to us.

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37-43 Box St., Brooklyn, N. Y. of America, Inc. EVergreen 9-4260-4261

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The responsible leadership and management back of every Sinclair & Carroll ink you purchase mean value to you over and above the price per pound. Sinclair & Carroll inks tell their own story by press performance and in the uniformly good results lithographers are obtaining with them throughout the country. They are manufactured under the supervision of men whose lifetimes have been spent in the development and perfecting of inks to their present high standard. Use a Sinclair & Carroll ink on your next job going to press. We will welcome an opportunity to cooperate with you and personally serve your ink requirements.

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417 E. Pico St.
Tel. Prospect 7296

SAN FRANCISCO
345 Battery St.
Tel. Garfield 5834

NEW ORLEANS
518 Natchez St.
Tel. Main 4421

lowing were elected to the board of governors: George Schlegel, Jr.; Alfred Rode, Jr., Rode & Brand, Inc.; Charles Roberts, Brett Lithographing Co.; Harold J. Mobus, Kindred-McLean Co.; George Rufenacht, U. S. Printing and Lithograph Co.; Monroe Selling, Zeese-Wilkinson Co.; and James Strobridge, Strobridge Litho Co.

Haloid Names Wilson

At the annual meeting of the stockholders of Haloid Co., photographic paper manufacturers, Rochester, N. Y., held last month, Joseph C. Wilson was elected to membership on the board of directors. Re-elected to the board were Gilbert E. Mosher, chairman; Joseph R. Wilson, Edwin C. Yauck, H. Eugene Niles, W. H. Salmon and Homer A. Piper. John B. Hartnett was elected secretary and Harold S. Kuhns controller of the corporation by the board of directors. Continuing in office are: Gilbert E. Mosher, chairman; Joseph R. Wilson, president; Edwin C. Yauck, vice-president; Joseph C. Wilson, treasurer; H. Eugene Niles, assistant treasurer; and Martha M. Scheuerman, assistant secretary.

Joseph C. Wilson joined the Haloid organization in 1933. He was elected secretary in 1936, and secretary and treasurer in 1938. John B. Hartnett began his work with Haloid in 1936. He has been in charge of sales promotion and advertising. Harold S. Kuhns joined The Haloid Company in 1936, serving as auditor in charge of accounting. Directors voted an interim dividend of 25 cents payable on April 1, to stockholders of record March 22.

Sign of Spring

The Huber Soft-Ball Team, of J. M. Huber, Inc., manufacturers of inks, dry colors and varnishes, has issued a blanket challenge to all soft-ball teams in the graphic arts industries. The challenge, which comes from A. H. Miller of the sales department, in part reads as follows: "We have built up a great deal of enthusiasm during our spring training. However, our scouts advise us there is little activity in other camps. We

John B. Hartnett (right), recently-elected secretary, Harold S. Kuhns, (below, right,) recently-elected controller and J. C. Wilson (below), recently-elected member of the board, of Haloid Co., Rochester, N. Y.



are hoping that the soft-ball spirit of last year will be renewed since we are very anxious to take on all comers." Those who think they have a team that can give the Huber Indians a workout are requested to get in touch with Mr. Miller and arrange for a spot on the schedule.

William F. Strasmer Dies

Employees of the lithograph department of Cupples-Hesse Envelope & Lithographing Company, St. Louis, attended in a body the funeral of William F. Strasmer, 67, who died last month after 27 years' employment in the company's engraving department.

Forms Offset Firm

G. Ray Bardgett resigned recently as sales manager of the St. Louis plant of John S. Swift Co., planographers, to establish his own concern, Bardgett Printing & Publishing Company, with offices and plant at 105 South Ninth St., St. Louis. Long associated with the Swift Company, Mr. Bardgett is

a past president of the Associated Printers & Lithographers and is widely known in the trade. The Bardgett company, in which G. Ray Bardgett, Jr., is also associated, will specialize in offset printing.

Dayton Rubber Entertains

Dayton Rubber Manufacturing Co., Dayton, Ohio, entertained New York printers and lithographers at the Belmont Plaza Hotel, New York, last month with a dinner, followed by a slide-film describing the development and present-day application of Dayco synthetic rubber printing and lithographing rollers. A. J. Hunt, manager of the Dayco Division, acted as host assisted by William J. Goodwin, development manager, Ray Heidinger, George Lambert, and Robert E. Lee, Jr. of the New York office, and W. D. Tuck of the Philadelphia division. The slide film, entitled "Science Marches On", was a dramatized story of the development of ink rollers and was followed by a

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Chemicals
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*Dependable Results
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LITHOGRAPHERS—You can save money and obtain better and more dependable results by standardizing on Schultz High Quality Deep Etch Chemicals. This sounds like a large order but we have proved it conclusively to the many lithographers that are now using our chemicals for all their deep etch work.

Schultz chemicals have been perfected over a period of years. They will take the mystery out of your deep etch problems and enable you to use the process profitably on a wider range of jobs. Write today for complete details.

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Coating	\$3.00 per gal.
Developer	\$3.00 per gal.
Etch	\$3.00 per gal.

QUANTITY DISCOUNT on above chemicals ordered in any combination as follows:

5 gallons	\$2.50 per gal.
10 gallons	\$2.25 per gal.
25 gallons	\$2.05 per gal.

Lacquer	\$5.00 per gal.
Developing Ink	\$5.00 per gal.
Blockout Lacquer	\$1.00 per pint
Etching Pads	\$.35 each

H. J. SCHULTZ CO.
231 Institute Place, Chicago, Ill.

*Paste
this in
Your hat*

Coming next month!

**THE
LITHOGRAPHER'S
MANUAL**

(formerly The Photo-Lithographer's Manual)

Completely revised, enlarged, expanded and brought up to date (right up to the last minute, in fact), The Photo-Lithographer's Manual, re-named THE LITHOGRAPHER'S MANUAL, will be fresh off the press next month (May 15 is the date) crammed with all the latest information regarding offset presses, litho inks, plate-making, cameras, lamps, paper, type, color, chemicals, research developments, sales training and promotion, trade associations, as well as miscellaneous production, sales, equipment and maintenance data.

Order your copy now!

You may order through MODERN LITHOGRAPHY or directly from the publisher. Price \$4.00, postpaid. Please send remittance with order.

WALTWIN PUBLISHING CO.
1776 BROADWAY NEW YORK, N. Y.

talk and demonstration by William Goodwin in which he described the properties of synthetic rubber rollers for printing presses.

E. H. Macoy Dies

Earl H. Macoy, 59, a former president of the Lithographers National Association, New York, died at his home in Chicago recently. He was president of National Printing & Engraving Co., and was formerly president of the Employers Association of Chicago.

Mark Papermaking's 250th Year

Boston Banknote Co., lithographing concern, Boston, lithographed the series of poster stamps which are being used to commemorate the 250th anniversary of American paper making being celebrated this year. The stamps were designed by William Bond Wheelwright, Cambridge, Mass., well-known to readers of MODERN LITHOGRAPHY since the first of the year as the author of the column "Offset Paper At Work." The poster stamps commemorating the anniversary bear an illustration depicting the paper making process as carried on at both the first and the last of the handmade paper mills. It is reproduced from a photograph of the model in the Paper Museum of Crane & Co., Dalton, Mass. Copies of the 250th anniversary of American paper making poster stamps can be obtained by writing to Mr. Wheelwright at 10 Forest Street in Cambridge.

Phila. Club to Hold Exhibit

The Litho Club of Philadelphia is sponsoring an exhibit of lithographed products at the Poor Richard Club, in Philadelphia, April 22 to 26. The exhibit will consist of the best products of lithographing, advertising and manufacturing on paper and tin from all of the large lithographic shops in Philadelphia and vicinity. Advertising agency men, lithographic and printing buyers, litho salesmen and the managers and owners of lithographic plants are invited to attend and participate in the exhibit. Its purposes is to acquaint the buyers and printers of



New window display designed and produced by Niagara Lithograph Co., of New York and Buffalo, for Sergeant's Dog Medicines, products of Polk Miller Products Corp., Richmond, Va.

lithography with the possibilities of the process by showing samples of its successful use. Those interested in further details of the exhibit are requested to get in touch with William J. Stevens, Litho Club of Philadelphia, 62-32 Hazel Avenue.

On Offset Paper

Two graduates of the Chicago School of Printing and Lithography, Philip Tubising and John Dossman, hold key positions in the production department of the *Opelousas Daily World*, first daily newspaper produced by offset lithography, of Opelousas, La. Dossman, whose home is in Opelousas, entered the Chicago school for special work prior to assuming his job on the newspaper, while Tubising, whose home is Richmond, Ind., is the son of a newspaper plant superintendent in the Hoosier city. In writeups carried in the *Daily World's* initial issue the educational backgrounds of the two in connection with the Chicago school was described.

School Opens Spring Term

Chicago School of Printing and Lithography, Chicago, started its spring term last month with a heavy enrollment in both day and night

classes in camera work, plate making and offset press departments. A waiting list has also been built up for classes opening next September, according to Harold E. Sanger, director. A new course in advertising and sales promotion has been added to the curriculum, with Joseph A. Kiss as lecturer. Mr. Kiss was formerly an advertising copy writer for various concerns and former director of the Ray School of Advertising for ten years. He is the author of a number of books on advertising. During the approaching summer, Mr. Sanger announced, alterations will be made at the school to provide space for equipment needed for instruction next fall in color separation work.

Launch Tea Program

The National Tea Bureau, cooperative group engaged in the promotion of tea, announces the fifth of a series of summer advertising campaigns to promote iced tea. The campaign will include the use of 2,537 "Tea Peps You Up" posters on boards in 145 cities throughout 36 states. In addition, portfolios of all the display material to be used during the drive will be made available to the grocery industry.



A New Comer

We introduce DAMPABASE, the seamless undercovering for your dampening rollers. It's new and as modern as offset lithography itself.

With DAMPABASE you can throw away your needle and cotton. All you have to do is slip it on the roller and it makes a perfect base for your AQUATEX. The fabric is semi-absorbent and its softness affords a good cushion for the rollers.

It comes in four sizes and can be made to fit any lithographic press.

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Says Secret Ink "Dopes" Have No Place in the Pressroom

Offset press performance would be vastly improved if they were abolished, Theodore Makarius, of Brett Litho, tells Production Club Meeting

A SERIES of practical suggestions on offset press operation, an analysis of the causes and cures for several common ink troubles, and a very definite admonition that "cure-alls" and secret "ink dopes" have no place in the modern press room constituted some of the most important points in a talk on offset inks given by Theodore Makarius, head pressman for Brett Litho Co., Long Island City, N. Y., before the Printing Ink Production Club at the Hotel New Yorker, New York, the evening of March 27th. The right way to run inks, said the speaker, is as near as possible to their original consistency. Varnish should be added by the pressman only if it is necessary to make the ink flow and work properly on the rollers. A group of just four varnishes was recommended for normal pressroom use, — #000, #0, #2 and #8.

The selection of the proper varnish to be added, when one is necessary, depends, said the speaker, on the specific gravity of the color being run. With heavy colors such as yellows a heavy varnish such as #2 should be used. Colors of medium weight would require a medium varnish like #0. Most reds and blues fall into this class. With blacks, the lightest varnish, #000, is recommended. A varnish as heavy as #8 is required only on certain warm reds which are very heavy, and for some purples and blues ground in very short varnish. Addition of the heavy varnish to such colors will serve to prevent powdering and chalking.

As for kerosene, boiled oil, turpentine, magnesia powder, gum ara-

bic, and such "cure-alls", each one dear to the heart of thousands of pressmen, the speaker indicated that press performance would be vastly improved in practically every case if such "dopes" were eliminated from the ink cabinet. If a press is set up properly, he said, such additions to the ink are unnecessary. Their elimination will bring the pressman a step nearer to standardized and reproducible printing. In the same vein he commented on the absence of a scale in four pressrooms out of five. The careless methods used by many pressmen in measuring proportions of driers and ink are the most common causes for ink not drying properly, he commented.

Turning to the subject of drying, Mr. Makarius asked ink makers to give the pressman recommendations on the can on suggested proportions of drier and ink. It is desirable, he said, for inks to be adjusted so that when the same amount of drier is added to each, all the colors will dry in the same time. The less drier that needs be added, the better. Combinations of driers are unnecessary in the opinion of the speaker and he also went on record as disagreeing with the theory that driers need to be changed with changes in the paper stock. Any normal paper stock can be run without changing the drier, he said, as long as the press is properly set up. Recommended proportions were an ounce of drier to the pound of ink, with the addition of the same amount of petrolatum.

Turning from inks to rollers, Mr. Makarius pointed out that stripping trouble, often wrongly blamed on

inks, may be the result of glassy-surfaced rollers. Excessive kerosene in wash-up treatment will put a glaze on the rollers and unfit them for further use until resurfaced. Varnish remover is effective in eliminating the glassy surface condition from some composition rollers, he advised, and alcohol will do the job on rubber rollers. The job is best left, however, to the roller-makers' service department.

Still on the subject of rollers, he advised that three rollers are sufficient for the average offset job, even on heavy solids. On the larger presses, he warned, the fourth form roller may be a source of trouble. It may sag in the center and thus do a defective job of inking, leading to scumming and inking troubles. Other common causes of scumming, he said, are excess etch in the water or too much pressure between blanket and plate.

Turning to another common complaint he gave his listeners a pointer on how to solve the problem of coated paper sticking to the blanket at the beginning of the run. A little extra water on the sheet will often do the trick, he said, the effect apparently being to counteract the static in dry press room air. Another suggestion was made on handling the problem of non-uniform or spotty drying. Such troubles, when not due to waterlogging of the ink, are often traceable to the previous job run against the same blanket. If the previous job, carried a heavy image and the run was fairly long, often it will be found that the blanket has absorbed sufficient grease to affect the drying of the subsequent run. For this reason he specifically recommended that when an important coated offset job is being run that a new blanket always be used.

One further suggestion was made as to procedure in asking ink makers for color matches. The inks received are almost invariably too light, he pointed out, as the pressman cannot run as much ink as the prover piles on his press. To avoid this situation he recommended that the prover be given inks 10% lighter than those to be supplied to the pressman.

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down for over
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We had the same
worries until
we changed to
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it is folly to be without it



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NEW EQUIPMENT AND BULLETINS

Braznell "Nogres"

Braznell Co., 2227-29 Walnut Street, St. Louis, manufacturers of varnishes, dryers and compounds for the printing and lithographing trades, has recently issued a circular describing its "Nogres" offset reducing varnish, and its offset cobalt dryer. The two products have been manufactured to counteract greasing of the ink regardless of the amount of varnish or dryer added. "Nogres" offset reducing varnish is said to have the tack of approximately linseed varnish No. 0 and to possess good body. Regardless of the amount added to the ink, according to the manufacturers, the varnish will not only not grease, but will stop ink that has been greasing. Tests have shown, it is pointed out, that even where the varnish was added to the rollers without mixing it into the ink first, all greasing was stopped. Additional advantages claimed for the varnish are that it provides a much freer working ink and one that will not wear the plate. Similar properties are found in the "Nogres" offset cobalt dryer it is said. Regardless also of the amount of this material added, it is said, there will be no greasing of the ink in any season. Further particulars on request.

Crocker-McElwain Sample Book

Crocker-McElwain Co., Holyoke, Mass., is distributing a sample book showing specimens of its Action Ledger. The various sizes and weights made by Crocker-McElwain and stocked for immediate shipment are listed. Copies available.

New Rubber Lining

American Graded Sand Co., Chicago, has developed a new rubber lining for graining machines known as "Agasco Tough Stuff," a specially treated acid and abrasive resisting rubber $\frac{1}{4}$ " thick. It is installed in the grainers to eliminate wavy plates and, by preventing the abrasive from

entering under the zinc or aluminum sheet, provides greater abrasive efficiency, it is claimed. The composition of the lining is said to be of such a durable quality that it will last as long as a steel plate, and rigid enough to lay in place without being cemented to the bottom of the machine. Further information on request.

New Paper Drying Lamp

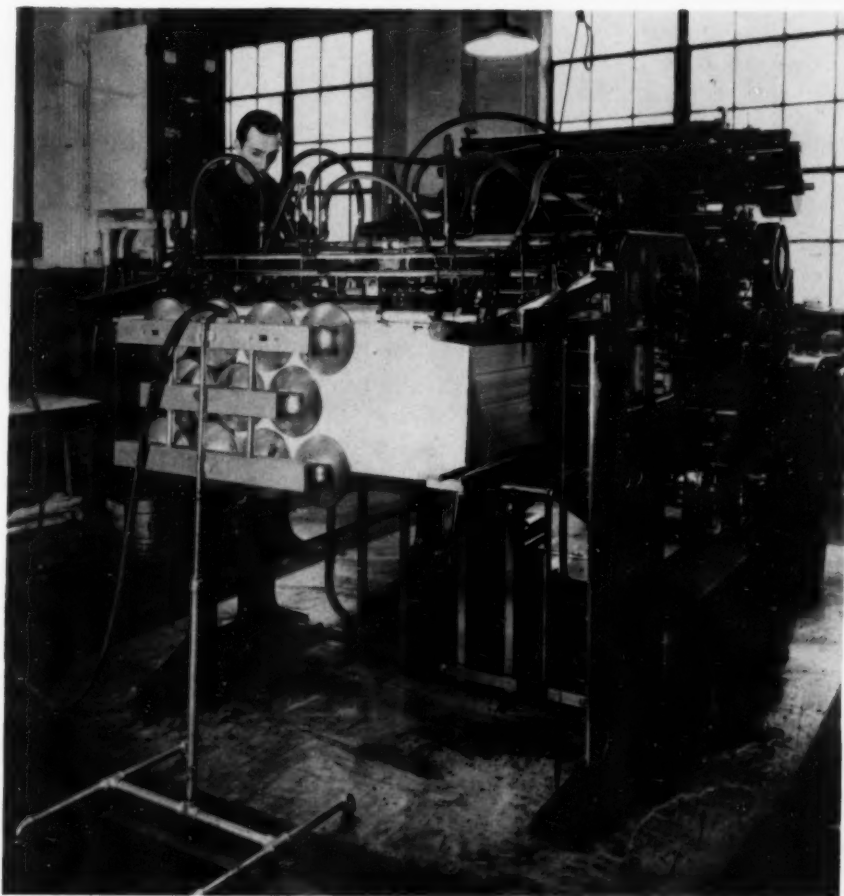
Tompkins Printing Equipment Co., Detroit, has announced the development of a new infra-red drying lamp for conditioning paper as it is fed to the offset press in order to eliminate the hanging of paper on certain jobs. The development is the result of a

series of experiments carried on at a leading lithographing plant in Detroit with the cooperation of the Duquesne Light Co. The drying lamp is said to produce a satisfactory light for removing the wave from the edge of the sheet, thereby eliminating wrinkle trouble. Further details are available from Tompkins Printing Equipment Co., 545 West Larned, Detroit.

Transportation Advertising

Barron G. Collier, Inc., New York, has just issued a new booklet entitled "Techniques in Transportation Advertising" designed as a source book for new and different treatments in transportation advertising copy and art. Short copy and long copy, car-

New infra-red drying lamp for conditioning paper as it is fed to the offset press. A new development of Tompkins Printing Equipment Co., Detroit.



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Lithographic Reducing Varnish

Eliminates greasing when mixed
into inks

Will not grease regardless of
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Improves drying

Eliminates chalking

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Does not grease regardless of
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toons and photographs, testimonials, contests and sampling and other advertising techniques are discussed with samples furnished to illustrate each type. Copies are available.

Anets Air Conditioner

Anetsberger Brothers, Chicago, are distributing a circular describing the new Anets Midget air-conditioner designed to overcome pressroom difficulties encountered through unfavorable reactions of paper stock to seasonal conditions. According to the manufacturer, installation and operation of the new Anets Conditioner will enable lithographers and printers to maintain any desired degree of temperature or relative humidity within a given space. The conditioner will also, it is asserted, provide for better drying of inks while the presses are in operation or during the after-drying period when the impressions have been made. The unit is installed on wall brackets or by overhead suspension. Outside dimensions measure 34" long by 25" wide by 15" high. The unit is controlled by a combination thermometer and humidity gauge which is said to maintain automatically a given degree of temperature or humidity. Literature available.

"Selling Talk"

Ralph C. Coxhead Corp., manufacturers of the Varityper, New York, is preparing each month a bulletin called "Selling Talk," designed to provide new ideas for those who produce offset. Brief paragraphs in the current issue offer ideas for approaching the insurance, hotel and store markets as possible sources for increasing direct mail activity through use of lithography.

New Book about Newspapers

John E. Allen, editor of *The Linotype News* and author of "Newspaper Makeup", of Mergenthaler Linotype Co., Brooklyn, is the author of a new book published by Harper & Brothers, entitled "The Modern Newspaper—Its Typography and Methods of News Presentation." Among the subjects discussed and illustrated in the new book are: newspaper streamlining;

departmentalization of the news; front-page digests of the news; week-end summaries of the week's news; non-conventional, non-standardized writing of the news; modern front pages; recent prize winners; the modern tabloid and some future experiments in that field; many of the things to do and not to do when modernizing the dress of a newspaper, and some arresting comments concerning the newspaper of the future. The book, priced at \$3.00 the copy, postpaid, contains more than a hundred illustrations of important points in modern newspaper makeup, and a modern head schedule.

Eastman Employees Honored

The following employees of Eastman Kodak Co., Rochester, N. Y., were chosen by the Committee of the National Association of Manufacturers last month to receive the Modern Pioneer Awards: Leslie G. S. Brooker; John G. Capstaff; Kenneth C. D. Hickman; Roy S. Hopkins; John G. Jones and Haywood G. Dewey; Lloyd A. Jones; Carl J. Malm and Associates; Carl J. Malm, Hans T. Clarke and Associates; Leopold D. Mannes and Leopold Godowsky, Jr.; George L. McCarthy and Roy S. Hopkins; C. E. K. Mees; Joseph Mihalyi and Associates; Samuel E. Sheppard and Associates; and Henry E. VanDerhoef and Associates.

Announce Annual Exhibition

Chicago's 14th annual exhibition of Design in Printing, sponsored by the Chicago Society of Typographic Arts, will open June 14. Chicago lithographers intending to submit entries are being asked to have them ready before May 21, when the jury will begin the judging. Last year two of the seven winners were submitted by lithographing concerns.

Elected to Board

Charles Kuoni, of the art staff of R. R. Donnelley & Sons Co., Chicago printing and litho firm, has been elected a member of the Board of Directors of the Art Directors Club of Chicago. William A. Kittredge, art director of the Donnelley company, is also a member of the club's board.

Correction

In last month's issue it was announced that Martin Strauss, formerly with Academy Photo Offset Division of Gerson Photo Offset Co., New York, had established Strauss Lithographing Co., in New York. The reference to Academy Photo Offset as a division of Gerson Photo Offset Company was in error. Academy Photo Offset is not a division of Gerson Photo Offset Company and never has been.

St. Louis Sales Decline

The January analysis of printing and lithographic sales in St. Louis, compiled from reports of members of the Associated Printers & Lithographers, shows a decline of 10.6 per cent compared with the December, 1939, volume. The January totals, however, were better this year than last, being up 8.8 per cent. Gordon C. Hall, executive vice-president of the association, is conducting a campaign to keep printing pricing on a sound basis regardless of lulls in volume. It is impossible, he points out, to increase the volume of printing by making unsound price cuts since such concessions tend to increase the frequency and seriousness of lulls in printing buying.

Lithos Flintkote Report

The annual report of the Flintkote Co., New York, for the fiscal year ended December 31, 1939, a 28-page lithographed booklet containing, in addition to the financial statement of the company, many illustrations of Flintkote Co. products, has been lithographed by National Process Co., New York.

George C. Wales Dies

George C. Wales, lithographer of Brookline, Mass., died last month. A native of Boston and a graduate of the Massachusetts Institute of Technology, Mr. Wales was the author of "Etchings and Lithographs of American Ships."

Champion Paper & Fibre Co., Hamilton, Ohio, is distributing a folder containing reproductions of black and white photography printed with gloss inks on its Champion Wedgewood coated offset. Copies are available.

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Several years of painstaking research has preceded our now presenting to the lithographic industry, *at considerable savings to the user*, TECHNO pre-tested formulas for you to . . .

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(Albumen Type and Deep Etch)
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You can save more than *half* of your present cost by using our methods. All the above preparations have been tried and tested in lithographic plants. Samples upon request.

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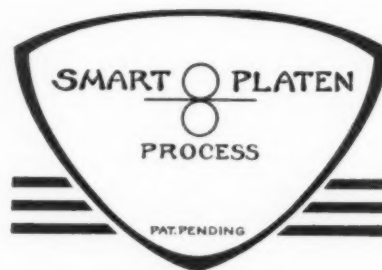
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WITHOUT DISMANTLING**

C. W. LATHAM
6 LAFAYETTE AVE., BKLYN., N. Y.

Offset Press Operation

(from page 33)

ming, streaking, blinding, sharpening, caking of ink and undue fanning of the paper. The lithographer will do well to become more cylinder conscious and institute a procedure that will enforce a periodic check-up of every press. A quarterly check should assure him of cylinder conditions.

A simple, inexpensive and accurate method of testing cylinders is to print solid sheets of paper under varying degrees of back pressure. There are certain rules under which this must be done to get the best results, and a copy of these rules should be given to the pressman or foreman making the test. The first rule is that an absolutely new blanket must be used. A blanket even slightly used will have swollen portions in it due to absorbed oils. Use a plate that has been carefully gummed and dried, and do not use the dampeners. Pack both plate and blanket to normal printing heights. Use a dark colored ink, any waste ink will do and a half-pound will suffice, mixed with about two pounds of lakatine and kept in a short buttery consistency. The ink fountain need not be used, but ink up the rollers evenly with a printable film of this ink.

Now drop the rollers onto the dry plate and ink it up solid. Now back the impression cylinder off ten or twelve points, or until it is certain that no printing will occur when the pressure is applied. The pressure may now be thrown on and the blanket inked up with an even overall printing charge of ink and the press is ready for the running of the paper. Run a sheet or two through with pressure and see if they print. Do not be misled by a scum that may appear on the sheet from slapping the blanket as it goes through. Real printing will be easily discernible when it appears. Now take up on the pressure adjustment exactly one-one thousandth and print again. Continue taking up on the pressure adjustment and printing a sheet or two between adjustments until the sheet prints solid all over.

If this test is carefully made, this set of sheets will show the condition

of the cylinder surface, if the blanket is accurate. If for any reason, the blanket is suspected of being partly responsible for the variation in the prints, turn it end for end and pull another set of sheets and compare the two sets. From the time the first printing occurs until the sheet prints solid should take only three, one-point, adjustments. If it takes more, the cylinder is out of round to the extent of the extra number of points necessary.

Chicago Local Marks 25th Year

Chicago Local No. 4, of the Amalgamated Lithographers of America, marked its 25th anniversary last month with a monster dance and cabaret party at the Stevens Hotel, Chicago. George L. Dutcher, press room foreman, Edward Keogh Printing Co., was chairman of the committee in charge of arrangements. Between 3,000 and 3,500 members and guests attended the event. Two orchestras provided music. Fred W. Zeitz is president of Local No. 4.

Introduces New Display

Magill-Weinsheimer Co., Chicago litho concern, is promoting a new type of point-of-sale display called "Tower Displays." Tower Displays are lithographed duplicates of package designs produced on a single sheet of cardboard to represent lofty stacks of cans or cartons. They are designed to catch the eye by their unusual towering height and provide a safety factor not possible when actual containers are stacked.

Edward F. Goos Dies

Edward F. Goos, 74, who for sixty years was associated with Strobridge Lithographing Co., Cincinnati, died last month. Sometimes identified as Cincinnati's dean of lithographers, Mr. Goos will be remembered by old Cincinnatians as the star pitcher of the old Queen City baseball team.

Having Drying Troubles?

(from page 43)

not be attached to the importance of avoiding retardation of ink drying due to moisture.

However, moisture is not the only

cause of non-drying of lithographic inks. There are several other contributing factors that must be taken into account. Quite frequently many difficulties attributed to non-drying are actually caused by other reasons. The apparent result seems to be non-drying yet sometimes when a careful analysis is made other reasons are discovered. One such often occurs, for instance, when the stock is of such a nature that it absorbs all of the binder used in making the ink with the result that the dry pigment remains on the surface and can be rubbed off, giving the impression that the ink had not dried. Usually a condition of this sort can be remedied by the addition of more drier. The extra drier causes the ink to dry before the paper has had time to absorb the vehicle. The addition of a heavy varnish, too, will help to counteract the absorbent quality of the paper and prevent too great an absorption of the vehicle. Many so-called difficulties with non-drying are due to too much drying. This situation is present particularly where colors must be trapped over one another. If the first colors are too hard a condition is caused which allows the inks to be rubbed off and this is believed, erroneously, to be due to non-drying. The lithographer should carefully study the conditions which must be met in a job. If a multi-color job is to be run over an extended period, then care must be taken as to the amount and kind of drier used in first-down colors. Periods of time extending 48 hours or longer between colors require diligent drier manipulation. Paste drier alone can be recommended in such cases, and in those instances where inks are natural driers no additional drier should be used. A safe procedure to follow is to govern the drier content according to the time sequence of the job.

Little or nothing has been said about the effect of dampening solutions on the rate of drying of lithographic inks. There is no doubt, however, but that certain dampening formulations do have a marked effect. Hygroscopic salts developed as the result of the action of the dampening solutions on the plate are very likely to give drying difficulties. It seems, therefore, that a

(Turn to page 72)

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The finest negative opaque on the market — consistency and satisfaction assured.

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Manufactured by the Intaglio Corporation expressly for

NORMAN-WILLETS COMPANY

316 W. Washington St.

Chicago, Illinois

Plate-Making Procedure

(from page 25)

exposed and therefore have no developing should be desensitized. In other words, so processed that they will repel ink and attract water. This procedure is called plate etching. It is effected by pouring a generous quantity of a special solution called plate etch over the entire plate, allowing it to act for a few minutes and then washing it off. In our opinion, the etch recommended by the Lithographic Technical Foundation, Inc. is by far the most satisfactory that we have found. It is an acidified bichromated solution of gum. There are other etches also in use, such as the well-known white etch, which is a solution of ammonium nitrate, phosphate, fluoride, and calcium chloride in gum arabic.

Chromic acid etches are also used, but they are extremely poisonous in nature and their continued use is inadvisable. The plate etch is sometimes applied with a soft camel's hair brush, and well brushed over the surface of the entire plate. This method tends to remove partially hardened particles of coating and is highly recommended. After the plate etch has been thoroughly rinsed from the plate, an extremely thin film still remains there by adsorption, which cannot be removed by any ordinary amount of rubbing. It is this thin layer of gum solution that acts as the desensitizing medium.

Gumming

If the plate is to be stored for later use, a gum solution is applied over the entire plate, rubbed evenly until a thin film is formed and then fanned dry. A solution of gum of 10°B. is quite suitable for this purpose.

Washing Out

The developing ink on the image contains a certain amount of burned linseed oil which has the tendency to harden and render the ink film unsuitable as an ink receptive medium. To avoid this, it is customary to wash the plate out with a solution of asphaltum and oil, remove all the developing ink, and then store the plate. This step is quite simple. After gumming, the plate is thoroughly dried, a small quantity of the asphaltum

solution is poured on and rubbed evenly over the entire plate. The asphaltum solution dissolves the developing ink and leaves a thin film of oil that cannot become hard over the entire plate.

Variables in Reproduction

(from page 37)

negatives already outlined for continuous tone work is directly applicable to halftone separation negatives. In addition, uniformity in the halftone technique (screen distance and aperture system) is strictly necessary with, of course, certain modifications. Whenever the operator is in doubt regarding the intensity and color value of his lights, it is always better to overexpose somewhat to be on the safe side. Providing development has been both correct as well as complete, the overexposure can be corrected by chemical reduction without appreciably affecting the quality or gradation value of the negative.

The yellow ink is a very weak color as viewed by the eye and, since it is customarily printed down first, a certain amount of the brilliance of the yellow may be lost by a slight penetration into the pores of the paper. Furthermore the other inks which will be printed on top of the yellow are not transparent and will also reduce its reflective power. To overcome this, the yellow halftone negative is usually made carrying a fuller tone (more open), while a halftone positive would be closed up more. Naturally certain neutral tones, including white, will carry too much yellow. When working indirect, this can be compensated for by straining or opaquing the desired areas in the continuous tone negative. A direct halftone could be exposed higher than necessary. By protecting the areas requiring less yellow with staging varnish, the rest of the image can then be reduced to the desired value.

One of the earliest masking methods which still has a definite application in modern reproduction processes was advocated by Dr. Albert of Munich in 1894. Its purpose is to remove density from the shadow areas of each color. This is accomplished by means of a light posi-

tive from the black printing negative which is in turn registered with each of the separation negatives when making the continuous tone or halftone positives. This system has the advantage in that it helps preserve fine shadow detail which might otherwise be lost or covered by the four impressions. Some workers have combined the Eastman method with Dr. Albert's by correcting the red and black printers with a thin positive from the blue negative and correcting the yellow and blue printers with a positive from the black negative.

A MASKING method to overcome some of the difficulties encountered when separating Kodachrome transparencies was recently made public (Transparency Masking Process—Gavaert Company of America, Inc.). One of the chief obstacles encountered with this type of colored copy is the inherent contrast of the films. This can be effectively reduced by registering a thin contact negative with the Kodachrome. The brightness scale is thus reduced to the range reproducible on present-day sensitive materials. Color corrections can also be made by simply making three thin contact negatives from the Kodachrome through complementary filters and registering each one in turn with the Kodachrome when making the separation negatives. The negative mask made through a "minus" blue filter (Wratten #12) is combined with the color film when making the yellow printer. The negative mask made through the "minus" green filter (Wratten #33) is used for the red plate while for the blue printer a mask made with a "minus" red filter (Wratten #44A) is used.

There are numerous masking methods, some of which are doubtful as to value. Some may fulfill the needs of a particular process or of an individual shop. It should be evident that masking methods are intended to overcome particular defects and they certainly should not be condemned merely because they do not alleviate all the deficiencies of the reproduction processes. The value of proven masking methods should not

(Turn to page 67)

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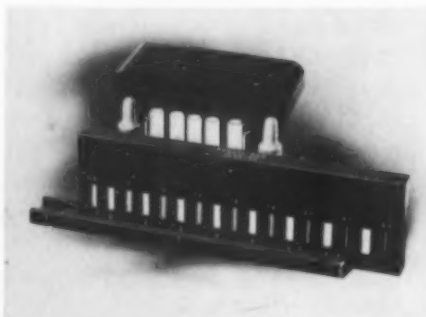
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LITHOGRAPHIC ABSTRACTS

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Photography and Color Correction

The Camera Does It. *Inland Printer*, 103: 38-9, August, 1939. Numerous examples are given to illustrate the photographic method of M. J. Weber for producing variations of type and line matter and all-over repeat patterns. (*Monthly Abstract Bulletin of Eastman Kodak Company*, 25, 1939, p. 652).

Agfa Color Chart for Color Photography. H. Arens and G. Heymer. *Veröffentlichungen des wissenschaftlichen Zentral-Laboratoriums der Photographischen Abteilung Agfa*, 6, 225-229, 1939. This new Agfa color chart contains a series of patches of saturated colors together with four more series of similar colors with varying "black" and "white" content. A scale of grey tones is also given. The reflection curves of the pigments used are given and the reasons for their choice are stated. The chart also contains a resolving power test object. (*Photographic Abstracts*, 19, Part 4, No. 76, 1939, p. 261).

Infra-Red Reproduction. Anonymous. *Klimschs Druckerei-Anzeiger*, 67, Jan. 12, 1940, pp. 20, 22. The use of infra-red plates for production of the black negative in four-color work is discussed and attention called to the fact that for best results, the copy should be prepared with pigments which reflect infra-red rays. Pigments such as Schweinfurt green, Prussian blue, and Cyan blue are

unsuitable, since they absorb infra-red radiation. The blacks in the copy should not be produced by mixture of various colors but should be created with black pigments (those absorbing infra-red), otherwise a false rendition will be obtained in the black negative. Attention is further called to the difficulty of securing sharp images through infra-red filters, because apochromatic lenses are not calculated for correction of infra-red rays. (*American Photo-Engraver*, 32, No. 3, March 1940, p. 241).

Photoengraving. W. S. Marx, Jr. (to Printing Arts Research Laboratories, Inc.) U. S. Patent No. 2,191,939 (Feb. 27, 1940). The method of rendering a half-tone negative free from screen pattern in the highlight sections, comprising treating the remaining sections of the subject with ultra-violet light absorbent and then photographically exposing the negative to the subject so treated in the presence of ultra-violet light only.

Film Characteristics—III. Anonymous. *Photo Technique*, 2, No. 3, Mar. 1940, pp. 24-9. The third article in this series on using negative materials most effectively deals with various methods of controlling contrast, and shows how the contrast and general appearance of the negative depend on the properties of the developer and emulsion. The various faults in exposure and development of the negative are discussed, especially with relation to the sensitometric curves of photographic materials. Nine illustrations are given which enable the photographer to correlate the appearance of the negative with the region of operation on the D-log E characteristic curve.

Developments in Color Photography. D. A. Spencer. *Process Engravers' Monthly*, 47, No. 553, Jan. 1940, pp. 11-14. A clear non-technical discussion is given of the ad-

ditive and subtractive processes of color photography, color mosaic films (Dufaycolor), repeating back and one-shot cameras, and integral tri-packs (Kodachrome). Although color transparencies will not completely replace color prints for the commercial photographer, considerable increase in color photography and reproduction will result from their extended use.

Physics in Color Photography. D. L. MacAdam. *Journal of Applied Physics*, 11, No. 1, Jan. 1940, pp. 46-55. This review of the problem of the correct spectral sensitivities for color separation records indicates that the application of color mixture curves to color photography advocated by Maxwell and Ives has been completely justified by the experimental investigations of van Kreveld, Webb, and Spencer. Consequently the peculiarity of photographic response which appeared to forbid the application of physical reasoning to color photography is a misconception. The importance of the application of physical data to subtractive color photography and color correction by masking is explained. Curves and a comprehensive bibliography are included.

Photo-Lab Index (Book). H. M. Lester, Editor. Morgan and Lester, New York City. 1939. Volume I. \$3.50. This loose-leaf book comprises a collection of the important photographic formulas and charts of seven large American film manufacturers, among them Kodak, Dufaycolor, Agfa, and Defender. There are sections on film data, filters and filter factors, illumination, weights and measures, etc. Quarterly supplements are to be issued at a cost of \$1.00 for four quarters, to keep the work up to date. (*British Journal of Photography*, 86, No. 4153, Dec. 8, 1939, pp. 725-6).

Polarizing Light for Lithographic Photography. I. H. Sayre. *Mid-western Lithographer*, 4, No. 9, Jan.

A



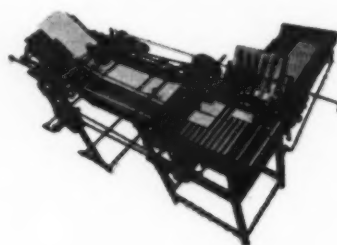
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1940. pp. 3, 6-8; No. 10, Feb. 1940, pp. 5-6. Following definitions of polarization and polarized light, the four chief methods of polarizing light are discussed: (1) by passing a beam of light through a plate of tourmaline, (2) by reflection, (3) by simple refraction, and (4) by double refraction. Diagrams illustrate the phenomena described. An efficient polarizing device in sheet form, applicable to photographic work, has been invented by Edwin H. Land and is available for commercial use in Pola-Screens. The elimination of specular reflection by polarized light is useful in copying matte prints, framed pictures, pencil, crayon, and ink drawings, and oil paintings.

Control in Optical Printing. O. Bender. *Photographische Industrie*, Aug. 23, 1939. *Photo Technique*, 2, No. 3, Mar. 1940, pp. 45-6. Illumination systems used in projection printing to control the character of the projected image are described and illustrated by diagrams.

Registration for Color Masking. P. J. Aubry. *Photo Technique*, 2, No. 3, Mar. 1940, pp. 49-50. Procedure and apparatus used in a method of mechanically registering masks for color correction are described. Constructional detail diagrams of the necessary apparatus are included. Advantages claimed for this method are: (1) negatives once registered remain so indefinitely, (2) reliefs are automatically registered for masking, (3) prints may be made from the dyed reliefs without register marks showing in the print, and (4) finished prints have white borders.

Planographic Printing Surfaces and Plate Preparation

A. C. Hardy (to Printing Plate. Interchemical Corp.). *U. S. Patent* No. 2,190,185 (Feb. 13, 1940). A contrast image having parts representing different tones and consisting of a plurality of elements in each of which the ratio of white area to black area corresponds to the value of the tone represented, the size of the black areas ranging upwardly from a predetermined minimum size occurring only in tones lighter than

the middle tone and the size of the white areas ranging upwardly from a predetermined minimum size occurring only in tones darker than the middle tone, and the size of the elements ranging upwardly from a minimum size occurring in the middle tone.

Printing Plate. A. C. Hardy (to Interchemical Corp.). *U. S. Patent* No. 2,190,186 (Feb. 13, 1940). A printing plate having parts representing different tones and consisting of a plurality of elements in each of which the ratio of printing area to non-printing area corresponds to the value of the tone represented, the size of the printing areas varying above a predetermined minimum occurring only in parts representing tones lighter than an intermediate tone, and the size of the non-printing areas varying above a predetermined minimum occurring only in parts representing tones darker than said intermediate tone, and the printing and non-printing areas being equal in size and greater than their respective minimum sizes in the part representing said intermediate tone.

Lithographing Process. P. Schroeder. *U. S. Patent* No. 2,192,482 (Mar. 5, 1940). In a process of preparing a metal plate for lithographic printing which involves sensitizing the plate, transferring thereto a photographic image, and inking, the steps of applying to the inked surface of the plate a plate solution consisting of a relatively concentrated aqueous solution of chrome alum, phosphoric acid, tannic acid and gum arabic and allowing the reaction to proceed, then applying to the resultant surface of the plate a relatively dilute aqueous solution of chrome alum, phosphoric acid, tannic acid and gum arabic.

Repairing the Stainless Steel Plate. W. N. Misuraca. *National Lithographer*, 47, No. 2, Feb. 1940, pp. 38, 63. The operations of cleaning, coating, exposing, and developing stainless steel plates are outlined. After development, Mirac Plate Base for Steel Plates should be very carefully applied, the plate washed with turpentine and then benzol, and a film of a special base applied (Dubar is

recommended). After being treated with a thin film of asphaltum, washed, rolled up, and gummed, the plate is ready for the press. Formulas for the cleaning solution and albumin coating are given.

Equipment and Materials

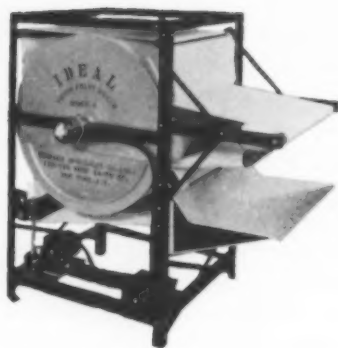
Graining Machine. O. B. Mack. *U. S. Patent* No. 2,192,233 (Mar. 5, 1940). In plate graining apparatus, in combination, a supporting base, frame members mounted thereon, comprising a relatively fixed member, a second member superposed thereon with capacity to move freely, flanges on the proximate sides of said members, which form ball pockets, balls in said pockets, the diameters of which exceed the combined axial dimensions of said flanges, and rings positioned in said ball pockets, surrounding the balls therein, respectively, the interior radial dimensions of which exceed the diameters of said balls, providing clearance which prevents binding of the balls in said rings.

Paper and Ink

How the Properties of Adhesives are Related to the Properties of Paper Surfaces. F. Camps-Campins. *Paper Trade Journal*, 110, No. 8, Feb. 22, 1940, pp. 120-122. The comparative pore structures for a few papers are evaluated from their air content values. The penetrating properties of the adhesive have to counterbalance the pore size of the paper; papers with small pores require penetrating types of adhesive, while papers with large pores need filming types. Further, pore size affects the rate at which adhesives set, and also the behaviour of wet glue films under pressure. The properties of the adhesive must compensate for these factors and for unequal porosities in the surfaces to be adhered.

Measurement of Printing and Lithographic Inks. R. F. Reed. *Printing Equipment Engineer*, 59, No. 5, Feb. 1940, pp. 13-15. A non-technical illustrated discussion of the Inkometer, a new instrument used to determine the consistency of lithographic and printing inks.

Grain Direction in Paper. A. E. Rayner. *Paper and Print*, 12, No. 4,



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Winter 1939, pp. Supp. 80, 82, 84. Grain direction is a fundamental feature of the structure of the sheet and greatly influences the behavior of the paper. Strength, rigidity, flexibility, tendency to expand or contract, to curl and develop wavy edges, are all bound up with grain direction. The correct grain direction for ledger sheets, menu cards, book papers, and bottle labels is discussed. It is of vital importance in all forms of printing involving accurate register, as paper expands and contracts with changes in relative humidity about ten times more across the grain than with it. Direction of grain can be determined by observing the wire mark, by tearing, folding, and wetting. Grain direction should be specified in ordering paper.

A Coverage Table for Litho Inks.

G. Cramer. *MODERN LITHOGRAPHY*, 8, No. 2, Feb. 1940, pp. 35-6, 69. An ink coverage table based on actual operation and past experience would be of great value to the lithographic industry. Important factors in estimating the amount of ink needed are: (1) smoothness and penetration of paper stock, (2) specific gravity, strength, and opacity of pigment used, (3) efficiency of operation of equipment used, (4) the amount of work on a litho plate, and (5) press troubles which may cause a series of wash-ups. Wide variations in ink coverage statistics from a number of shops indicate clearly the need for a set of standards.

Process Inks. E. M. Ludlam. *American Ink Maker*, 18, No. 2, Feb. 1940, pp. 25-7. When half-tone dots of two or more colored inks overlap in subtractive color reproduction, the color is the result of white light, reflected from the white paper, from which each of the inks has absorbed certain proportions. Opacity of any one of the inks causes false and grayed tones. As it is only in the very light and light middle tones, where the dots do not overlap, that color is formed by the additive system, the importance of transparency in process inks is easily recognized. As it is essential that scattered light from surface roughness be reduced to an absolute mini-

mum, new gloss inks are in many cases supplanting matte surface colors. The fact that absorption curves of known pigments are not ideal must be considered in making inks. Black ink used for the black printer should be as neutral and as transparent as possible.

Synthetic Resins for Printing

Inks. H. C. Cheetham. *American Ink Maker*, 18, No. 2, Feb. 1940, pp. 29, 31, 33. The selection of resins for printing inks must be made on the basis of special properties and behavior, rather than the usual physical constants. Types of resins best suited to rapid drying by oxidation, gelation, penetration, evaporation, and curing are enumerated, and their properties discussed. A growing number of new printing surfaces and new uses for printed matter call for special vehicles and special resins. Acid numbers of resins are unreliable guides in predicting stability or reactivity with pigments, as are melting points in estimating hardening effect or thermoplasticity. The correction of emulsifying difficulties of vehicles used in lithography lies not only in the selection of a suitable vehicle but also in the avoidance of any conditions favorable to its emulsification.

General

Causes of Scum Plates in the

Pressroom. J. Stark, *Lithographers' Journal*, 24, No. 11, Feb. 1940, pp. 460, 476. The main causes of scumming on the offset press are; (1) mixing the ink too thin, (2) the addition of too much dope to ink and fountain water (No. 0 Litho Varnish should be used to reduce ink to the required working consistency), (3) too smooth grain on the plate, (4) excessive pressure between blanket and plate, (5) poor condition and improper setting of inking and damping rollers, (6) failure to gum up the plate during press stops, and (7) substances in paper sizing or coating which have a sensitizing effect on the plate.

Miscellaneous

Second Installment on Stripping.

T. Stephenson. *Lithographers' Journal*, 24, No. 11, Feb. 1940, pp. 459, 483. The following items are neces-

sary to efficient stripping work: (1) shop envelope or job ticket, (2) stripping tools, (3) copy bag, and (4) dummy layout. Good copy eliminates a lot of hard work on negatives and plates. Handling of copy and allowing for margins in stripping are discussed, and terms used are defined.

Design in Metal Lithography.

W. N. Misuraca. *MODERN LITHOGRAPHY*, 8, No. 2, Feb. 1940, pp. 37-8. The correct placing of borders and labels on metal sheets to give the desired effect on the finished container requires careful manipulation. Since seam allowances, location of beads, bottom seams, etc., vary, it is advisable to make and keep on hand a diagram or "scribed blank" for each type of can. An accurate method of determining the metal stretch or distortion that takes place when the cans are formed in a die is discussed. The shape of the finished metal package should be considered when preparing a design for it, as well as the mechanical problems involved in the design's reproduction.

Variables in Reproduction

(from page 61)

be underestimated. By intelligent manipulation of any of these masking methods, a marked degree of correction is obtained with little effort and expense. In addition the amount of handwork required is reduced and the photographic quality of the reproduction is retained which otherwise might be lost by reason of excessive handwork.

Do not be discouraged by the obstacles and difficulties associated with color work. Faithful reproduction of colored copy may be a desirable quality but not at all necessary. Accurate reproduction does not necessarily mean salability. Strive for perfection but do not expect to achieve it. Turn your efforts toward the consistent creation of pleasing, effective and salable color reproductions as your goal.

American Decalcomania Co., Chicago, added a second Rutherford photo-composing machine to its facilities last month.

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Russell Ernest Baum (Folding Machy.)
Ralph C. Coxhead Corp. (Composing Machines)
Ben Day, Inc. (Shading Medium)
Dexter Folder Co. (Folding Machy.)
Leiman Bros., Inc. (Vacuum Pumps)
Ren R. Perry, Inc. (New and Used Equipment)
Planographers Rig & Reel Co. (Typewriter Attachment)

PAPER

Chillicothe Paper Co.

Hammermill Paper Co.
Mid-States Gummed Paper Co.
Rising Paper Co.
Sorg Paper Co.
Strathmore Paper Co.
West Virginia Pulp & Paper Co.
Whiting-Plover Paper Co.

PHOTO DRY PLATES AND FILMS

Agfa Ansco Corp.
G. Cramer Dry Plate Co. (Photo Dry Plates)
Eastman Kodak Co.
Norman-Willets Co.
Harold M. Pitman Co.

PLATE MAKING EQUIPMENT & SUPPLIES

American Type Founders Sales Corp.
Artists Supply Co. (Opaque)
California Ink Co., Inc.
The Douthitt Corp.
Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp.
C. P. Goerz American Optical Co. (Lenses)
International Photographic Research Laboratories
(Cameras—Densitometers)
William Korn, Inc. (Litho Crayon and Litho Crayon Paper
Pencil Mfrs.)
Lanston Monotype Machine Co.
National Carbon Co., Inc. (Carbons)
Norman-Willets Co.
F. G. Okie, Inc. (Opales—Developing Inks)
Harold M. Pitman & Co.
Rutherford Machinery Co., Div. General Printing Ink Corp.
Senefelder Co., Inc.
Simplex Specialty Co., Inc. (Film Dryers)
E. T. Sullebarger Co.
Texas Offset Supply Co., Inc.

PLATE MAKING SERVICES

Baker Reproduction Co.
Photo-Litho Plate Service Co.
Swart-Reichel, Inc.

PRESSROOM EQUIPMENT & SUPPLIES

American Type Founders Sales Corp. (Presses—Offset Spray
Gun, etc.)
Bingham Brothers Co. (Rollers, etc.)
Sam'l Bingham Son Mfg. Co. (Rollers)
Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp.
Godfrey Roller Co. (Dampening Rollers)
Harris-Seybold-Potter Co. (Presses)
Ideal Roller & Mfg. Co. (Rollers)
International Press Cleaners & Mfg. Co. (Press Cleaner)
International Printing Ink Div. of Interchemical Corp.
Kimble Electric Co. (Motors)
Harold M. Pitman Co.
Rapid Roller Co. (Rollers and Blankets)
The Rathbun & Bird Co., Inc. (Machinists)
Roberts & Porter, Inc.
Senefelder Co., Inc.
J. H. & G. B. Siebold, Inc.
Sinclair and Valentine Co. (Blankets)
E. T. Sullebarger Co.
W. A. Taylor & Co., Inc. (pH Control for Fountain Solutions)
Vulcan Proofing Co. (Rollers and Blankets)

CLASSIFIED

All classified advertisements will be charged for at the rate of ten cents per word. \$2.00 minimum, except those of individuals seeking employment, where the rate is five cents per word, \$1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of Modern Lithography, 254 W. 31st St., New York. **Closing date: 1st of month.**

Situation Wanted:

Engraver thoroughly experienced in doing fine lettering, buildings, etc., for commercial, check and label work with pen and ink, for the photo-offset process. Address Box No. 552.

Wanted:

Will purchase 22" x 34" offset press for Chicago plant. Give full particulars. Address Box No. 553.

For Sale:

One large Chemco film camera, three-roll type with single disappearing screen mechanism. Film box 21" wide, copy board 46" x 54". Complete with Zeiss 45 C. M. lens, Chemco stop rationer and focusing scales. Reply Box No. 554.

Wanted:

Circular screen, any size up to 24". State best price. B. B. Johnson & Sons, Memphis, Tennessee.

For Sale:

20" darkroom camera series A with 12' iron pipe stand, Levy tilting glass covered copy board, 16½" Goerz Gotar Lens, with stop rationer and Levy scaling system, Macbeth arc Lamps—all in good condition @ \$735.00; also various lenses, screens and lamps. T. E. Sullenbarger Co., 110 Fulton St., New York City.

For Sale:

Hall direct rotary press in good condition, size 44" x 64" equipped with Dexter push-finger feeder, jog-

ger delivery, and 220 AC 3 phase 60 cycle equipment. Address Box No. 555.

For Sale:

Gelb Spectro Twin arc printing lamps 110 volt 35 amp. \$40.00. 20" x 20" Wesel Dark-room camera, Macbeth camera lamps, Goerz 16½" lens, 133 line screen \$585.00. Singer Engineering Co., Camera & Lamp Experts, 242 Mott St., New York City.

For Sale:

Three Fuchs & Lang Transfer Presses; excellent condition; attractive price. At DeVenne-Brown Corp. plant, 19 Reade Street, New York.

Plate Graining:

Send your zinc and aluminum plates to BELL for prompt, efficient and satisfactory graining. Bell Litho Plate Graining Co., 6611 Vine Vale Ave., Bell, Calif.

Artist:

Fine artist, with wide reputation and many years experience both in this country and abroad, would like to make a connection with growing litho concern on either full or part-time basis. Especially good colorist. Excellent references. Address Box No. 551.

Photographer:

Young man, 23, seeks position in reputable plant. Four years experience with line and halftone in modern New York house. Locate anywhere. Address Box No. 556.

General Information Concerning Inventions and Patents:

A reference book for inventors and manufacturers, also containing sections on the registration of trademarks and copyrights, and a "Schedule of Government and Attorneys' Fees"—sent free on request. Simply ask for "booklet" and "fee schedule." Lancaster, Allwine & Rommel, Reg-

istered Patent and Trade-Mark Attorneys, 402 Bowen Building, Washington, D. C.

Kohl & Madden Move

Kohl & Madden Printing Ink Co., Chicago, has moved its New York headquarters from 207 West 25th Street to 636 11th Avenue. The new address provides Kohl & Madden with double its former space.

Addresses Ink Group

Theodore Makarius, Brett Lithographing Co., New York, was the guest speaker at the regular monthly meeting of the New York Printing Ink Production Club held at the Governor Clinton Hotel, New York, March 27th. Mr. Makarius, who was assigned the general subject of offset printing, spoke on some of the problems involved in the use of lithographic inks from the viewpoint of the lithographer.

New Books

(from page 45)

advertising is corny" before a convention of advertising people in Cleveland, he exploded a bombshell. Challenged on the one hand with being a Communist and on the other with more courage than discretion, Mr. Mangan determined to prove his assertion by writing a book. This is it. Rather, however, than engage in the bootless endeavor of proving his critics wrong, Mr. Mangan has taken the constructive tack of writing a grammar of advertising which approaches the practice and functions of that craft in the light of the changing standards in business and industry brought about during the past ten years. His book is generously illustrated with examples of advertising which are in harmony with his definition of the New Design. Undoubtedly there are many who will not agree with all that Mr. Mangan has to say, but there is no doubt also that he has written a provocative and stimulating work.

The Chemical Formulary. New Enlarged Edition. Published by Chemical Publishing Co., New York. Price, \$6.00.

Of interest to the darkroom chemist, this book is an up-to-date compilation of formulas for chemical compounding and treatment, covering many fields. The section devoted to photography contains over 200 photographic formulas for developers, fixing baths, stock solutions, intensifiers, hardening baths, reducers, toners, desensitizers and others. The book has been edited by a board of editors representing the various fields covered of which, Norman S. Fyfe, Agfa Ansco Corp., is one.



"ASCO"
(RED)
OPAQUE
BLOCKS OUT
WITH A
SINGLE STROKE
Exceptional opacity permits close contact with print.

Ground extremely fine. Flows freely from brush, pen or airbrush. Leaves a thin smooth film that will not crack or chip off.

Test it yourself — Send for a sample.

ARTISTS SUPPLY COMPANY
7610 Decker Ave. Cleveland, Ohio
Ask your dealer for "Asco"

We Cover the West Coast

If you are west of Chicago we can help you keep the wheels moving (and the profits rolling in) by supplying you quickly with dependable equipment, photo supplies and chemicals from one of our six completely stocked offices.

EQUIPMENT
PHOTO SUPPLIES
CHEMICALS

Your phone will bring a representative — quickly!

PHOTO PROCESS DEPARTMENT
THE CALIFORNIA INK CO., Inc.
SAN FRANCISCO LOS ANGELES PORTLAND SEATTLE
SALT LAKE CITY SHANGHAI, CHINA

THE RATHBUN & BIRD CO., Inc.

IN BUSINESS SINCE 1898

MACHINISTS

For LITHOGRAPHERS — PRINTERS

PLANTS MOVED

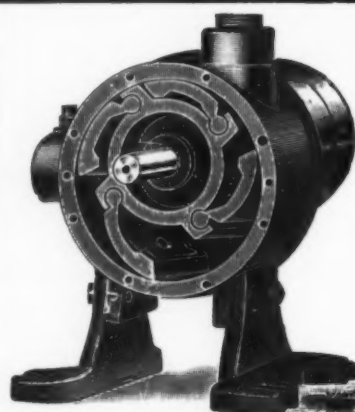
REPAIR SERVICE

MACHINES RE-CONDITIONED

85 GRAND STREET

NEW YORK, N. Y.

Telephone: CAnal 6-4145-4146



LEIMAN BROS. ROTARY VACUUM — PUMPS —

Blowers, Gas Pumps,
Air Motors
For operating Gas Burn-
ing Blowpipes

Furnaces
Oil Burners
Paper Feeders
Bottle Fillers
Gas Machines
Atomizing
Agitating Liquids
Vacuum Printing Frames
Printers, Bookbinders
Machinery

Efficient
Powerful NOISELESS
LEIMAN BROS.
23 Walker Street
NEW YORK CITY

FREE TRIAL OFFER

SUPREME OFFSET BLACK

That's just what we mean — a chance to find out why hundreds prefer Supreme Offset Black. It's a clean working, hard drying rich black with an absolute minimum of "greasing" on the plate.

Write for information on our
FREE TRIAL OFFER

E. J. KELLY COMPANY
1829 N. Pitcher St. Kalamazoo, Mich.

KORN'S

LITHOGRAPHIC CRAYONS

" CRAYON PAPER PENCILS

" STICK TUSCHE

" LIQUID TUSCHE

" RUBBING INK

" TRANSFER INK

AUTOGRAPHIC TRANSFER INK

MUSIC - PLATE TRANSFER INK

Manufactured by

WM. KORN, INC.

260 WEST STREET

NEW YORK

MAKE MONEY with



Hundreds of Lithographers are making money by using the Vari-Typer . . . the composing Type Writer with changeable faces and spaces. This compact machine reduces composition costs, for forms, bulletins, booklets, catalogs, folders, etc., for Offset reproduction. Investigate the Money Making possibilities in your business.

RALPH C. COXHEAD CORPORATION

Manufacturers of Vari-Typer
333 Sixth Avenue New York, N. Y.

COUPON

Check—Tear off—Attach to your letterhead—and Mail.
These Profitable Mid-States Gummed Paper Printing
Helps FREE upon request:

☐ Sample Book of Mid-States REALLY FLAT Gummed Paper.

☐ Guide to Proper Gumming. (Tells the correct gumming to use for sticking to different surfaces.)

☐ Portfolio of Printed Samples.

☐ Portfolio of Information on Poster Stamps—A new merchandising idea for promotion-minded printers.

☐ Tel-E-Chart. (Solves your gummed paper problem before you print.)

No obligation—Check and return with your letterhead.

MID-STATES GUMMED PAPER CO.

2515 SOUTH DAMEN AVENUE — CHICAGO
New York—Cleveland—St. Louis—San Francisco

MODERN LITHOGRAPHY

The Artist Takes A Bow

Sun Press, New York printing and litho concern, has just mailed a folder captioned: "Pardon Me For Blushing, But . . ." with a line illustration showing a hard-working artist (or so we are to assume) taking a bow. Copy goes on to say: "With all the praise I hear around town about the swell stuff we're turning out, I guess I deserve a small part of the credit." "Yet," the copy reflects, "come to think of it, it's no wonder we are able to turn out a good job, what with everything under one roof. A swell string of copy writers, a good staff of artists (there I go blushing again), an up-to-the-minute typesetting department, and an entire floor of modern printing presses manned by men who know their craft." A prepaid postcard is inclosed for those who would like a Sun Press representative to call. The firm gives both letterpress and offset services on blotters, house organs, stationery, business cards, booklets, broadsides, folders, catalogs and labels.

Life of Goudy about Ready

Bernard Lebovit, a student in the Department of Printing, Carnegie Institute of Technology, Pittsburgh, has written a biography of Frederic W. Goudy, famed type designer, which will be published shortly. The book will contain approximately 128 pages. It is being set in Goudy's Monotype Village face, and will be a cloth-bound, 6x9 volume, priced at \$1.50. Advance subscriptions are now being accepted in limited numbers at that price. The story of Goudy as presented by Mr. Lebovit is a running narrative set forth in interesting style and replete with incidents and anecdotes as yet untold. Commenting on the biography, Mr. Goudy writes of Mr. Lebovit: "I think you have handled a very ordinary life with skill and have given it a quality not possessed by other ambitious attempts." Production limitations will restrict the edition to a 1000 copies. The book is not being offered for sale to the general public. Individual subscribers will be permitted to reserve from one to five copies. Its title will be "Behind The Type."

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"Sorry, CHIEF, but I can't wait to read this new issue of:

MODERN LITHOGRAPHY"

Cripes!

Our artist certainly went haywire on this one. What the heck kind of a drawing is it that shows our magazine as the indirect cause of practically wrecking a pressroom? Month to month we run articles and information that are *helpful* and *constructive* and tend to promote more efficient operation, and this guy comes along with something like this. The whole thing, of course, must be an exaggeration. It's no exaggeration, however, that MODERN LITHOGRAPHY is the magazine of today in the lithographing industry. No greybeard, the magazine has, in its short life, established itself as a leader, with a brisk modern viewpoint as refreshing as a good clean sweep of salt air.

Advertisers know this. That's why if they have equipment and materials to sell to the lithographic industry they advertise regularly in.

MODERN LITHOGRAPHY

254 WEST 31st STREET, NEW YORK, N. Y.

Having Drying Troubles?

(from page 59)

minimum amount of the various etching materials should be used in order to assure a minimum of difficulty with inks.

The lithographer should use every precaution in holding down the amount of water applied to the plate. Extreme care especially should be taken when a small amount of work is on the plate. In such cases frequently not enough fresh ink moves to and from the plate, thus developing an ideal situation for emulsification of the ink and, consequently, drying difficulties.

In summary, then, the following factors should be observed and studied by the lithographer in order to minimize drying difficulties: (1) damp or green stocks must of necessity call for an increased percentage of drier; (2) summer humidities must also be compensated for in like manner; (3) difficulties with trapping must not be overlooked in the effort to overcome poor drying; (4) electrolytic plate reactions must be watched so that the drier in the ink is not displaced; (5) care should be exercised by the lithographer to avoid the use of non-drying compounds.

* * *

A completely revised edition of the *Photo-Lithographer's Manual*, first issued in 1937, is being published and will be ready the middle of next month, so we are told. The new edition will be called the *Lithographer's Manual* and will contain the latest information on equipment and processes for lithography. We've seen some of the proofs. Here are a few of the articles we noted among the contents: "Operating a 17 x 22 Harris Offset Press;" "A Lithographic Darkroom," a suggested layout for a darkroom together with information about the kind of equipment needed: "Lithographic Camera Operation;" and "Kodachrome in Lithography." From what we saw it looked pretty good. *The Lithographer's Manual* is being published by Waltwin Publishing Co., New York. Price \$4.00.

* * *

Don't neglect to renew your subscription to MODERN LITHOGRAPHY! Each issue is important! It's published for you, Mr. Lithographer.

MODERN LITHOGRAPHY



This Sticks on the Job!

Here's the ideal adhesive for supporting film evenly and securely on glass for camera exposures. Agfa Stay-Flat Solution--available in convenient sizes--brings you these superior characteristics:

- 1. Perfect adhesion.**
- 2. Two types -- Regular and Matte.**
- 3. Easy to apply.**
- 4. Application used repeatedly.**
- 5. Economical.**
- 6. Clean.**
- 7. Dependable.**

STAY-FLAT SOLUTION

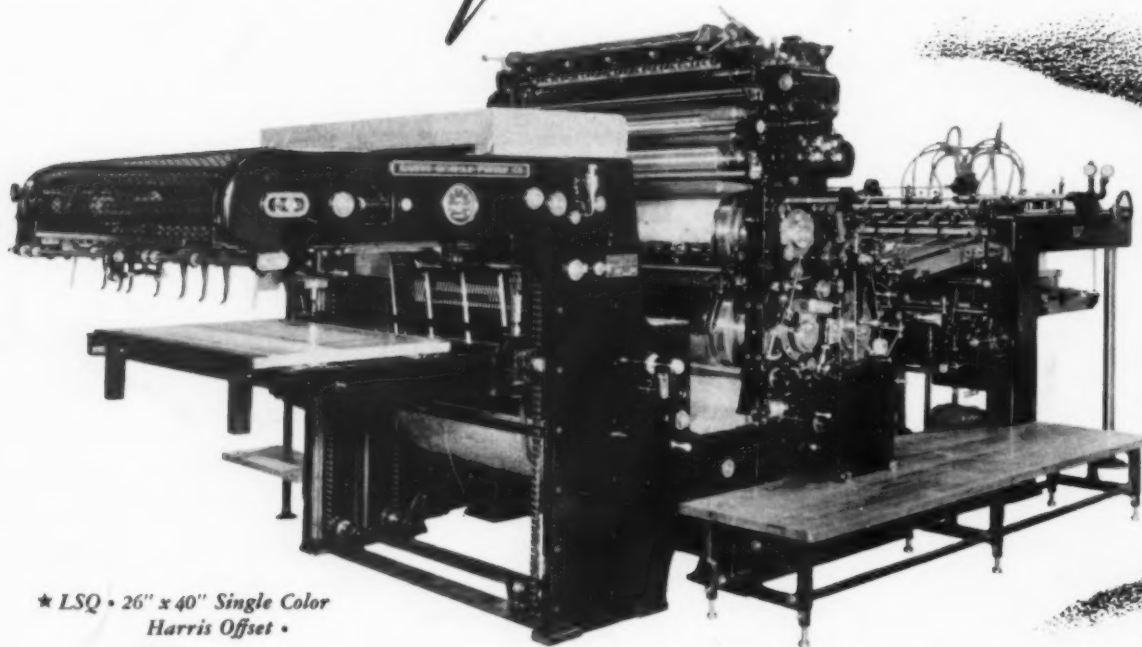


**FOR BEST RESULTS
USE BEST MATERIALS**

Agfa Ansco, Binghamton, N.Y. Made in U.S.A.

LITHOGRAPHY MEANS PROFITS

Only when the Production is
Delivered Satisfaction



★ LSQ • 26" x 40" Single Color
Harris Offset •

HARRIS LITHO-CHEMICALS

Through research Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problem.

Harris Service

It's Nation wide—
is as famous in the
Offset field as Harris
Presses themselves.



• To say that ALL lithography is profitable is like saying all silver is "sterling." Lithography is actually profitable only when the buyer gets all that Offset offers in press performance.

Back of every Harris Press are years of leadership in precision manufacture; in every Harris Press is that *invisible value* only experience can create.

Quality work can be produced only on quality presses. *Harris is the yardstick of Offset value*—value backed by the oldest and greatest name in lithographic equipment manufacture.

For every production need there is a complete range of Harris press sizes.

HARRIS • SEYBOLD • POTTER • COMPANY

General Offices: 4510 East 71st Street, Cleveland, Ohio; Harris Sales Offices: New York, 330 West 42nd Street; Chicago, 343 South Dearborn Street; Dayton, 819 West Main Street; Atlanta (Harris-Seybold Sales Corp.), 120 Spring Street, N. W.; San Francisco, 420 Market Street. Factories: Cleveland, Dayton.